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ABSTRACT

Population education has been introduced into school curricula in a large number of countries in most regions of the world. The purpose of this document is to help various national population education program leaders to share information and learn from each other. The publication is the result of a cooperative effort involving the participation of regional advisers in population education who are assigned to Unesco regional offices in Africa, Asia, Latin America and the Caribbean, and the Arab States. Part 1 of the book outlines the role of the book, and lists some key elements of population education. Part 2, "Issues and National Actions," provides examples of program efforts in different countries categorized by: (1) the start of population education programs; (2) curriculum and materials development; (3) inservice training of teachers; (4) preservice teacher training; (5) program management; (6) monitoring population education program progress and improving their quality; and (7) the transition of the population education program to an integral part of the school program. The appendices include a selected reading list and the addresses of various population education programs in the participating countries. (TW)

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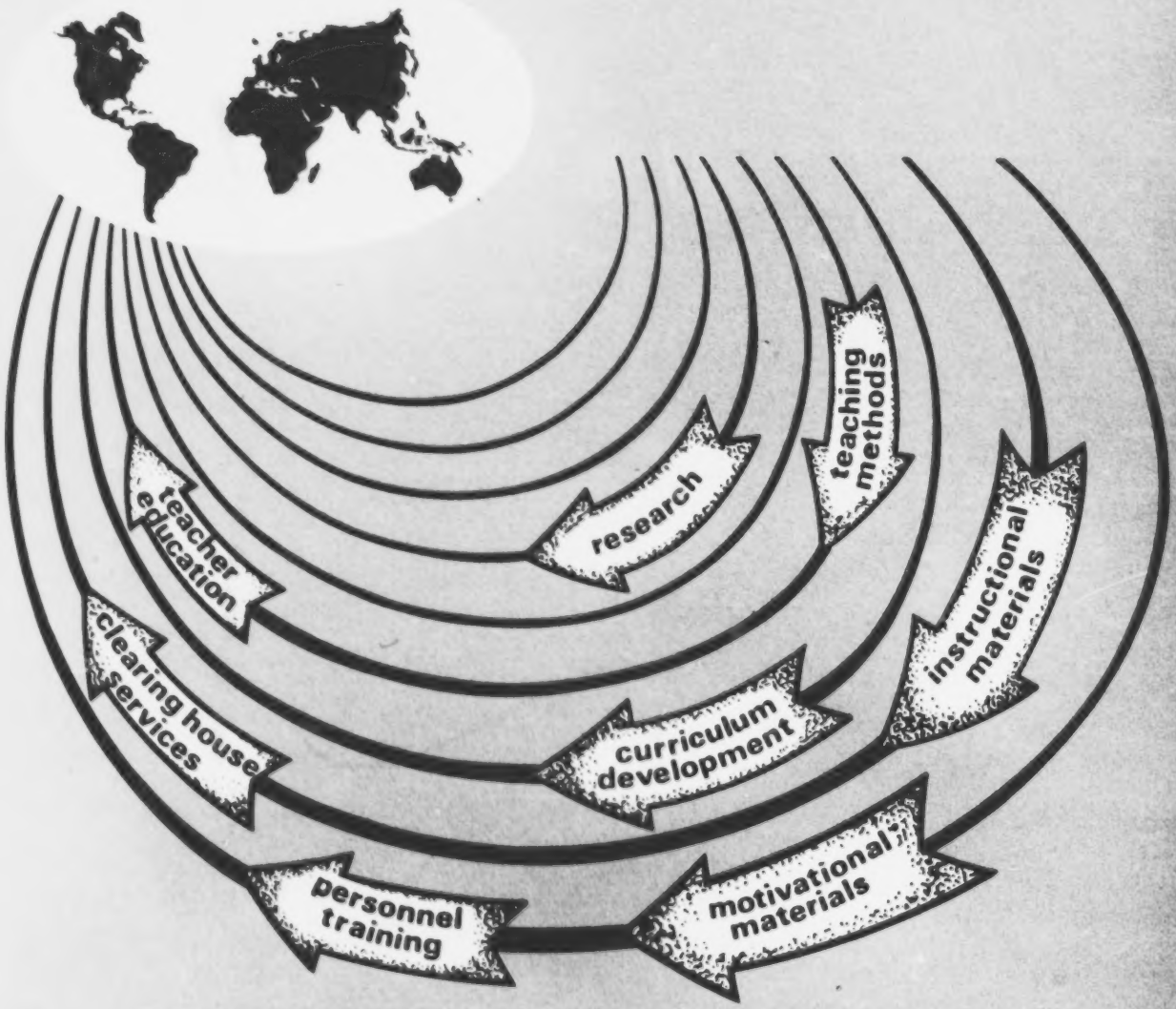
Managing National Population Education Programmes:

Issues and Actions



Managing National Population Education Programmes:

Issues and Actions

Population Education Unit
Division of Educational Sciences,
Contents and Methods

'Comparative Study
of Programme Development Strategies
in Population Education' (COSDEPE)
(Project GLO/81/P.22)

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Preface

In the relatively short period since about 1970, population education as a content area in school curricula has been introduced in a large number of countries in most regions of the world.

This educational innovation is distinctive in many important ways, including the absence of a long history of experimental development prior to its diffusion, the rapidity with which it was adopted, the limited number of educational leaders with extensive experience in population education. This development and extension, largely through the leadership of Unesco with the support of the United Nations Fund for Population Activities (UNFPA) are seen as important steps in educational change.

The development of population education includes a number of stages which are complex and time-consuming : the identification of the knowledge base, of specific educational contents, the formulation of objectives, the preparation of curriculum materials, their testing in field setting, the drawing-up of training materials and strategies for teachers and other educational personnel preparation, all activities which will lead to the introduction of this new content area into the school system.

The countries which have decided to introduce population education in their educational system have faced a number of specific problems, which are not always encountered when curriculum change occurs. For example, the educators responsible for promoting and leading the introduction of population education in their countries could not draw upon a large body of experience or extensive specialized training when faced with the development of a programme in this new domain.

During the past fifteen years, studies of various types have been made by individual countries and, under the sponsorship of Unesco, a number of reports have been published, including descriptions of

population education programme strategies in a selected number of countries. One of these reports examines the contribution of population education to educational renewal and innovation.

Nevertheless, no systematic study focussing on management constraints in the implementation of population education projects at national level has to date been made.

More and more countries are interested in introducing population education programmes in their educational system, or are at an early stage in the implementation of a project to this end.

With the experience accumulated over the years, Unesco has undertaken, in close cooperation with UNFPA, the **Comparative Study of Programme Development Strategies for Population Education** (COSDEPE) to provide a body of information to **national educational leaders** and assist them in their decisions and actions in developing population education activities.

Seven countries have cooperated in the collection of information and data for this study : India, Indonesia and the Philippines in **Asia**, Dominican Republic and Paraguay in **Latin America and the Caribbean** region, Sudan in the **Arab States** region and Somalia in **Africa.** Two **research instruments** for data collection were elaborated and tested in one country (Republic of Korea) by the Unesco Secretariat :

- "Basic Information on Current Status of Population Education Programme",
- "Interview guide for data collection".

Study missions were undertaken which provided a wealth of information on project development and management strategies.

The present report, however, is not limited to these seven countries, but includes rich and valuable examples of problem-solving approaches from other countries, since considerable knowledge and experience with innovative approaches to management issues is now available at national level.

The present document is the result of a cooperative effort involving the active participation of **regional advisers** in population education, attached to Unesco Regional Offices in Africa, Asia, Latin America and the Caribbean, and the Arab States - who met at Unesco Headquarters in Paris in January 1985 : Mr. Edouard El Wardini (UNEDBAS, Paris), Mr.Jairo Palacio (CRESALC, Caracas), Dr.R.C.Sharma (ROEAP, Bangkok), Mr. Alfred Ukaegbu (BREDA, Dakar).

Grateful acknowledgements should be made to :

- Mr. O.J. Sikes, Senior Technical Officer, Technical Branch, Population Education and Communication Section of **UNFPA**, jointly responsible for the study together with the Unesco Secretariat team ;
- Professor Sloan Wayland and Dr. Donald Chauls, Unesco **Consultants** at different stages of the study.

Our deep gratitude goes to the eight **national Directors** and **teams** which collaborated in the testing and data collection phases as a very valuable source of experience. Our thanks are particularly addressed therefore to :

- Mr. PARK-BONG-SHIK
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  Korean National Commission for Unesco
  Seoul, Korea

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  National Director
  Population Education Projects
  Khartoum, Sudan

Finally, we wish to thank all national project teams included in the present report, whose experience and collaboration at various moments and in different forms is a permanent source of information for the Secretariat both at Headquarters and in the Regional Offices.

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The opinions expressed in this document are those of the participants in this collective work and do not necessarily reflect the official view of Unesco. The designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Organization concerning the legal status or the delimitations of the frontiers of any country, territory, city or area or of its authorities.

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Part One

Introduction

Chapter 1

The Role of this Book

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1. THE ROLE OF THIS BOOK

1.1. Population education : A growing innovation

Population education is one of the most **rapidly-growing** educational innovations in the world. During the past fifteen years, it has gone from a situation where only a handful of countries had any type of consolidated effort to include population education in the school curriculum to the current situation where nearly one hundred countries are now at varying stages in the development of population education, family life education, family health education, sex education, or other related programmes. Few other new educational programmes have matched this pace.

Some population education programmes are now fairly well advanced. All of them - regardless of the extent of their development - have felt a series of 'growing pains' - difficulties or problems they have faced while maturing as national education efforts. Many of the obstacles they have had to overcome are common to any attempt to introduce something new into a school curriculum : virtually all innovations face at least some initial problems. But some of the obstacles derive not only from its newness, but also from its complexity and from some of the basic characteristics of population education itself.

1.2. Characteristics of population education programmes

Many of the basic characteristics of population education are relatively rare. While each of these may be found in one or more of the other new 'educations', the combination of them is unique to population education. These special characteristics which together distinguish it from other programmes may be summarized as follows :

1. The **overall objectives** of population education derive initially **from the developmental needs** of a country and its people, at

both macro- and micro-levels. These needs require individual actions to achieve personal, family, community and national goals. The individual actions required are frequently different from current normative behaviours. The country's development policies explicitly or implicitly aim to alter some of these behaviours, using population education as one tool to produce this change. Population education programmes reflect these policies by encouraging 'new' **values** and **understandings** upon which the desired **behaviours** are to be built. (At the same time, however, while encouraging new values, it is necessary for population education programmes to respect the existing socio-cultural values which people hold, this frequently creating a difficult situation of needing to respect conflicting values.)

2. Implicit in this value orientation is that ultimate **objectives** of population education activities are essentially in the **attitude** and **behavioural** domains. There are also **knowledge** objectives which are important in themselves, but many of the knowledge objectives in population education are intended largely as means to achieving other goals. For example, knowledge objectives such as a deeper understanding of social and demographic realities are included because it is believed that their achievement will enhance the student's concern for individual and social welfare.

3. A difficult characteristic of school population education programmes is that some of the **behaviours** these programmes are intended to influence will occur **years in the future.** This places a major burden on whatever methodologies are used to ensure that students **remember** the knowledge and **retain** the attitudes over a long period of time. At the same time, unfortunately, the nature of the behaviours themselves precludes their being tried out and practised in the classroom, thus preventing the use of some of the most effective teaching/learning methodologies which require **practice** of behaviours.

4. In part because of the need to influence distant behaviours and entrenched values, population education programmes must focus on the development in students of **process abilities and skills** in inquiry, problem-solving, value-analysis, self-discovery, planning, and decision-making. Although these skills are not uniquely applicable to population topics, they are nevertheless a **necessary** component of population education programmes. Some perceive these process skills as **means** to achieve other programme objectives but, increasingly, they are considered as basic **objectives** of the programme.

5. The **interrelatedness** of population education **with** population, health, environment, nutrition, and **other development programmes** is another of its major, relatively unusual characteristics. Because it is an integral aspect of a country's development efforts, there frequently are other projects and programmes, implemented by other ministries and private agencies, which have some of the same goals as the population education programme. There should be linkages among them in order to improve the efficiency of each. For example, the existence and nature of population communications and service programmes will significantly influence both the context and the content of school population education activities.

6. Population education's **interrelatedness with other new educational efforts** - by ministries of education and others - is also one of its unusual characteristics. Many countries which are undertaking the development of population education are simultaneously developing or considering efforts in related fields such as **environmental education, nutrition education, and education for the prevention of drug abuse.** The overall focus of all such programmes is improvement of the quality of life. Coordination among them is essential to ensure consistency and to optimize efficiency.

7. Population education, as a new educational area, does not have a single, tertiary level academic discipline which it 'reflects'.

Rather, its knowledge base is a **reflection of a number of different disciplines** and professional areas, containing content derived from demography, sociology, psychology, biology, medicine and other fields. (Recently, some interdisciplinary population studies courses have emerged at the tertiary level, but this is still relatively rare.)

8. Partly because it is interrelated with other programmes, partly because its knowledge base derives from several different academic disciplines, and partly because there are significant cultural and development policy variations from country to country, the **knowledge base** of population education **varies from one country to another.** Curriculum content selected by any programme will thus reflect their specific population situation and cultural context. This national variation in the 'knowledge base' - the basic core content upon which population education curriculum is developed - is probably one of the most unusual of population education's characteristics. In other educational areas, school curricula may differ from country to country, but there usually is a high degree of international agreement on what constitutes the scope of the intellectual content from which the curricula are drawn ; this is less true of population education.

9. Finally, another crucial characteristic of population education programmes is that they frequently initially face a degree of **internal opposition.** In part, this is simply because population education is new and all new programmes have to overcome a natural reticence against additional topics or programmes. In part, the opposition to population education is a reflection of the fact that it is very much involved with value change. Often, however, the initial opposition to population education derives more from a **misconception** than from the reality of its objectives and means. This seems to occur so frequently, in many countries, that one can generalize that **misunderstanding** of population education - by policy makers, education officials, teachers, parents, etc. - is one of its major characteristics.

1.3. Purpose of this book

As population education programmes develop, a number of key decisions and actions are taken by programme staff. Because of their newness and relative complexity, these programmes inevitably face a number of obstacles in their early years. Overcoming these obstacles or constraints is a major function of programme management.

The decisions and actions which population education programme managers have taken have usually been successful at overcoming the obstacles - although, obviously, some actions have been more successful than others. Sometimes, programmes in different countries have made the same or similar decisions ; at other times, their decisions and actions with respect to a similar issue have varied considerably. There are a number of instances where one programme has taken some action which might also have been desirable in another country, but was not taken in the second country only because it never occurred to the programme staff. It is for these situations that this book has been prepared.

The purpose of this book is to help national population education programmes to learn from each other, to increase the chances that an innovative idea developed in one country will be considered elsewhere. In essence, we hope to reduce the necessity of reinventing the wheel. If population education, family life education and sex education activities are underway in so many countries, what have they learned which can be of use to each other and to future programmes in other countries ?

1.4. Our approach to achieve this purpose : Examples of national actions to stimulate creative thought

With this purpose, the approach we have used in this book is to present a series of **examples of national actions.** This is based on a belief that the reality of the way countries usually learn from

each other is a creative one *. Our basic assumption is that an example of what occurs in one country can trigger creative thought and discussion by project leaders in another country. Their active consideration of an example can result in the decision to try an innovation in their own programme - either by acceptance, with appropriate modifications, of the other country's example or by development of an innovation which bears little resemblance to the original, or by anything between these extremes. **Triggering creative thought** is this book's most central intent.

What types of examples from other programmes are most likely to be able to accomplish this intent ? An example which is extremely brief, taken completely out of context, with very few details may be insufficient to 'set off' this 'trigger' mechanism. At the other extreme, an example which is comprehensive, which describes in great detail both the general context and the specific action, may be overwhelming - stifling rather than triggering creativity - as the reader gets lost in the details. A balance between these extremes has been attempted in the examples used in this book. Each example hopefully provides sufficient information about both the context and the action to give the reader a reasonably clear understanding without overwhelming him with superfluous data.

The majority of the issues (or obstacles or problems) reported in this book, as well as the examples of national actions to overcome them, concern aspects of population education which are somewhat unique, not common to most other educational programmes. There also are some problems which have been included even though they may be

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* As contrasted with a more systematic approach in which a 'model' or other complete programme ideal might be presented.

common to many other educational programmes ; this was done only in instances where a national action was perceived as being innovative by population education programme staff.

Each of the examples selected from more than 25 countries is real, reflecting actual population education programme actions which resulted in solving a problem, or overcoming some sort of programme management obstacle.

1.5. Elements of population education

As with any major educational effort, a population education programme is complex, composed of a large number of different types of activities. To more readily structure the analysis, it is useful to divide both the management processes and programme content of population education into a series of **elements** - more manageable, smaller pieces of the total programme.

These elements tent to parallel chronological stages in the development of the programme. Some aspects of their timing are fairly obvious ; for example, curriculum needs to be developed before teachers can be trained to teach it. However, at virtually all times, a population education programme is simultaneously performing several different types of tasks. Also, there is some evidence to suggest that certain tasks which have traditionally been done in sequence (such as developing in-service prior to pre-service training) may in fact be better if done in tandem. Because of these factors, it was decided to divide population education activities into a series of discreet elements, but to emphasize that, except for the first and last, these elements are not sequential.

The elements selected are :

- The start of population education programmes
- Curriculum and materials development
- In-service training of teachers

- Pre-service teacher training
- Programme management
- Monitoring population education programme progress and improving their quality
- Transition to an integral part of the school programme

These elements are generic in the sense that all national population education programmes must at some stage take action in each of these areas. The specific content of the actions will, of course, vary significantly from country to country. A description of each of these elements is presented in chapter 2.

1.6. Issues and actions within each of these elements

Within each of the seven elements, countries have made or will make decisions on a series of **basic issues.** For example, in starting a programme (element one), countries decide in which unit of the ministry to focus population education activity ; they also decide on the grade(s) and subject(s) for which to develop curriculum. Each of these we define as a 'basic issue'. These are also largely generic in nature, in the sense that any population education programme needs to address them in some manner.

Part Two of this book contains a series of summary descriptions of key **management issues with which population education programmes have dealt.** Each of these issues is explained, then followed by a description of **actions which national programmes have taken** with respect to the issue.

Some of these actions are more innovative than others. In selecting the examples, however, it was found that frequently actions which seemed to be standard procedure by some countries had not been considered by others. Thus, examples are included of a wide range of types of actions.

Within each of the elements of population education are hundreds of **potential** issues. The selection of issues for this book is based on two criteria : (i) an issue must be problematical rather than a normal aspect of programme management ; and (ii) the issue must have a resolution or an action by at least one national population education programme (for which we have received information).

In some instances, several programmes took essentially the same action in dealing with the same issue. In other instances, programmes approached the same issue somewhat differently. Finally, there are many instances where a population education programme chose two or more actions simultaneously or in succession to address a single issue. For many problems, such multiple actions are the best way of ensuring success - in part because one may be uncertain of the potential effectiveness of any action, but largely because complex problems frequently require more than one action to achieve a solution. Each action described in this document should be perceived as a partial rather than a complete solution.

In using this book, population education programme leaders should first identify the issues or problems their programme faces. Once an issue is identified, the various national actions should be read and discussed among the staff. Each example of national action should be perceived as a thought-provoker, not as a model to be copied. The basic question which programme staff should ask themselves should always be 'what action should we take to improve our own programme?' (not 'should we adopt this example?').

1.7. National contexts of these issues and actions

Knowledge of the national contexts within which an action occurs is an important factor in assessing the relevance of one country's action for application in another country. The contexts within which population education activity occurs comprise numerous factors. These include

broad areas, such as the cultural, demographic, political, administrative, economic, and educational situation. They also include relatively narrower aspects such as the extent of development of existing population education activities and the environment for such activities.

These differences in contexts, however, do not imply that countries - even with very different backgrounds - cannot learn from each other. There are numerous aspects of population education activities which are inherently necessary, in some form, in **all** countries. For example, in all countries school population education programmes require some type of curriculum development and training of teachers ; modalities may vary, but the basic needs are the same. There also are aspects of population education activities which are not necessarily **inherently** similar from country to country, but nevertheless have historically been similar across many countries. For example, over forty existing national population education programmes have had technical assistance from Unesco and financial assistance from UNFPA. Thus, even where the national contexts superficially may appear to be extremely different, certain aspects of their population education **programme** contexts may still be similar.

Contextual similarities and differences should be understood and considered, even if they are not necessarily decisive. Within the descriptions of national actions in this book, an attempt has been made to include in each case some information on relevant aspects of the population education programme context. However, readers are referred elsewhere for more general descriptions of each country's demography, culture, polity, economic situation, etc.

1.8. Caveat : The non-comprehensive scope of this book

The introduction and development of any complex programme such as a national population education programme will comprise some aspects

which are straight-forward, standard, simple to manage, non-problematical. These are usually more than balanced, however, by other aspects which are far more problematical, difficult to deal with, requiring creative thinking to overcome obstacles or to select from among a series of alternative approaches. A programme manager needs to manage both aspects of the programme, but must devote more energy and resources to ensuring that the difficulties are overcome. This book is devoted to the potentially problematic aspects of population education programmes only, assuming that other aspects can handle themselves.

As a result, this book is not comprehensive. It does cover all of the basic elements of population education programmes, but does so unevenly : for some of these elements, numerous issues and national actions are described ; for others, there is very little. The quantity of each is a reflection of the relative quantity of national actions to overcome obstacles, not simply of national programme action. 'Ordinary' programme planning and implementation have been largely ignored.

Another way in which this book is not comprehensive is that it does not address the theoretical arguments for and against various decisions on each issue. When a population education programme is considering an issue, all of the theoretical arguments for and against each prospective decision should be discussed at length. There are numerous written sources which present these positions, which can help clarify a theoretical understanding of each issue. This document, with its practical rather than theoretical orientation, is not a substitute for these other sources. Annex I contains a list of some of the more useful of the available books and other publications.

1.9. Summary and future improvement of this book

In sum, the major characteristics of this book are that it contains real national examples of actions taken by population education programmes to overcome various types of obstacles. It provides non-

comprehensive coverage of all aspects of the programmes, focusing on those issues which have been found to be more problematical than average. It should be used by population education programme leaders - who see themselves facing similar obstacles - as a 'trigger', to begin creative thinking of innovative ways of dealing with these issues.

This book is intended to be open-ended. There are actions, including highly innovative ones, taken by population education programmes which have not been included because they have not been brought to our attention. There are many instances of national programme actions which are designed and implemented by creative personnel who do not realize how innovative, how valuable these ideas can be. In order to help other countries, we request population education staff and others involved with population education activities to describe any such innovations and send these descriptions to Unesco Headquarters *. These should describe an **issue** or problem, the **action** taken and the **result**. It is Unesco's intention to up-date this book periodically, adding the more interesting programme actions which have come to our attention.

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Chapter 2

The Elements of Population Education

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2. THE ELEMENTS OF POPULATION EDUCATION

2.1. Introduction

The programme development process of population education may be divided into elements in different ways. The divisions one uses, are, however, important in that they structure and, to some extent, determine the nature of the analysis of the field.

The seven elements into which we have divided population education programme development contain four which are very traditional of such divisions (curriculum development, in-service training, pre-service training and programme monitoring), two which chronologically 'frame' the innovation (the start of the programme and the transition to its being integrated into regular school activities) and one (programme management) which links other elements together to form a coherent entity. This is not the only way of dividing up the field of population education, but it appears to be a reasonable one.

This chapter describes the components of each of these elements, as they relate to population education programmes. The parameters of each element are much broader than, but inclusive of, the specific issues and national actions which are described, within the framework of the same elements, in Part Two of this book. (The chapters of Part Two to which each section refers are in parentheses following the titles of the elements.)

2.2. The start of population education programmes (chapter 3)

In most countries, the initial impetus for population education activities comes from a recognition that the country faces one or more current or future population problems. In some countries, there may be an explicit national population policy within which population edu-

cation functions as a tool for the achievement of national goals. In other countries, there may be no explicit policy, but nevertheless a recognition that population education can assist in addressing population problems and in helping the country evolve an explicit policy.

The beginning of population education activities in a country requires a series of interrelated actions by high-level policy-makers and planners rather than programme implementors. Later elements of population education will also include some interventions by high-level personnel, but the bulk of other actions will be at the implementation rather than the policy level.

2.2.1. Policy decision and general support for a new project

At some point in time, a decision is reached to establish a population education programme. The persons involved in this decision, the factors which were taken into account in reaching the decision, the extent to which different sectors of the community are aware of or approve the decision vary from one setting to another. Since population education is still such a new field, it is not uncommon to have educational policy-makers who have never had any exposure to it. Thus, before the basic decision to develop a population education programme is undertaken, there usually occurs a learning process through which the decision-makers become aware of population education and understand its potential relevance for their country. This process varies, sometimes involving formal seminars or other meetings, sometimes done informally. Sometimes the process is a strictly internal one, although more commonly written materials and technical inputs at this stage have come from Unesco and other international and bilateral agencies.

2.2.2. Development and implementation of a programme planning process

At the beginning of national population education activities, a large number of key decisions need to be made - decisions which

will have important repercussions for the future of the innovation. A planning process is required whereby the country - usually the ministry of education - considers the various issues involved, then decides what to do concerning each. This process of considering the issues usually involves several individuals, reflecting the need to represent the different functional areas (planning, curriculum, training, research and evaluation, administration) as well as the different subject areas. In some countries, representatives from other ministries and private agencies concerned with population activities have assisted the education ministry in its planning process.

The planning processes vary, but usually consist of a series of meetings by the planning team, with each meeting addressing one or more topics, gradually leading to fuller understanding and consensus on each topic. International technical assistance is commonly used to facilitate this process, especially where population education **programme** planning is directly linked to an externally-funded **project** to support the programme.

2.2.3. Initial decisions on certain programme features

Fundamental decisions concerning a number of basic issues need to be made through this national planning process. Although many of these issues appear to be strategy rather than policy issues, they tend initially to be made at the policy level because of the implications which alternative decisions have on costs and allocation of personnel. The following are the major programme design issues usually addressed at this stage :

- overall goals and objectives
- which potentially controversial topics to include
- grade level or levels
- mode of inclusion
- subject or subjects.

There is a frequent tendency for the planning group to be overly-optimistic. Many programmes have begun with the impediment of being assigned to institute population education in more grade levels or subjects than they could reasonably handle. Objectives such as the number of teachers to be trained or the phasing of the various activities or the expected impact upon the country's population situation have also frequently been unrealistic.

Sometimes, at this stage, the planning group also may discuss and make initial decisions on more specific strategy issues such as:

- the amount of instructional time to be devoted to population education
- whether it should be presented in a prescriptive or a value-fair approach
- the extent to which innovative teaching/learning methodologies should be employed
- the basic structure of in-service teacher training to be employed
- whether pre-service teacher training in population education should begin simultaneously or at a later date, and
- whether non-school population education and communication activities should be integrated with or separate from the school programme.

2.2.4. Initial decisions on the design of and support for the unit(s) responsible for implementing population education activities

Based in part upon these decisions, usually occurring at about the same time and made through the same process are decisions concerning the organizational location of the responsibility for population education. This includes the structural relationship of this unit to other established units in the system and the size of the unit. Population education units most commonly have been located within curriculum development departments, educational planning departments or as semi-autonomous special projects.

At the same time, initial decisions need to be made concerning facilities, such as office space and equipment, and financial support.

2.2.5. Assignment of a competent core staff to carry out the programme

The responsibility for the implementation of these decisions must be given to a particular staff, either as an added responsibility or as a new assignment. This presents a special set of problems in population education because of the limited number of personnel who will have had specific training or experience in this new area. Frequently, especially when the start of the population education programme coincides with an externally-funded project, decisions on initial staffing requirements may be made within a context of expected local and foreign training opportunities for project personnel.

2.3. Curriculum and materials development (chapter 4)

Detailed formulation of the new content for each of the selected audiences, together with whatever instructional materials or other aids are judged to be needed, is at the heart of the implementation of population education. The form this takes depends in part upon the established pattern of the ministry of education's regular curriculum, and in part upon the resources available. Basically, the 'curriculum and materials' for population education consist at least of a syllabus, teachers guide and audio-visual aids for use by population education teachers. They may also include more detailed background readings for teachers, plus readings, workbooks and other items for use by students. Linkages between the new population curriculum and materials and the existing content should also be clarified.

The stages or steps of curriculum development will vary, depending upon both the ministry's established pattern for developing new curriculum and available resources. Most commonly, in population

education programmes, these include most of the following : preparation of the overall goals and objectives ; development of what is commonly referred to as the 'knowledge base', usually through preparation of a sourcebook ; preparation of instructional objectives ; elaboration of a 'scope and sequence' chart, which lays out the division of concepts (or instructional objectives or topics) by grade and subject ; writing of first drafts ; revising of first drafts ; field testing ; further revising ; then printing. At a later time, one or more revised versions, of all or selected parts of the curriculum and materials, might be produced through a similar but more abbreviated process.

Most of these stages or steps in curriculum development are common not only to population, but to virtually all content of the school programme. Only the need to develop the knowledge base is somewhat unique, although it is also common to environmental education, nutrition education and certain other new educations which, like population education, derive their content from more than one field of study. Essentially, some process is required to provide the curriculum developers with a clear understanding of both the scope and the details of the content of population education. This is usually done through development of a lengthy, comprehensive **national sourcebook.**

In some instances, national sourcebooks have emphasized the cognitive domain only ; in other instances, attitudes, values, process skills and behaviours are also included. Because of the overriding importance of non-cognitive objectives in population education, all population education programmes require some process for development of the 'beyond-knowledge' base, a presentation of the attitudes, values, skills and behaviours from which curriculum developers can select these aspects of the content of the curriculum.

Among the characteristics of population education outlined in chapter 1 were that its inclusion of a major emphasis on value change and a frequent need to motivate or to convince people of the importance of this programme, both to students and to the nation as a whole. At the curriculum development level, these issues take on a number of dimensions :

- objectives from the affective domain should frequently be central to the development of a unit or other segment of curriculum, rather than relegated to supplementary consideration, as often occurs ;
- any consideration of values needs to carefully balance an emphasis on change with a real respect for the existing values which may have served the society well for many years ;
- values and behavioural norms belong not only to school children, but to the society as a whole : curriculum developed for promoting value clarification and change can only be relevant if it recognizes this point and promotes meaningful interaction between the school and the community ;
- where issues are controversial (or appear to be so), there should be considerable interaction with high-level officials, educators, teachers and the general public to clear up misunderstandings, to learn from the society and to develop a supportive atmosphere for value change.

Another aspect of curriculum development is the extent of detail provided in the written materials for teachers and students. Relatively less-detailed materials are reasonable if the teachers already have sufficient knowledge of the topic plus skill with the teaching methodologies ; in such a situation, they can be expected - without additional help - to adequately fill in the gaps between the general materials provided by the ministry and the lesson plans and teaching aids needed to teach a class. Also, relatively less-detailed materials result, de facto, in a greater variation in the students' educational experiences, since different teachers may interpret a syllabus or other broad instructions very differently. However, since population education is new to virtually all teachers, and significant variations in interpretation are not desirable until teachers are more experienced with it, population education curriculum and materials need to be more detailed (and lengthier) than those prepared for other more traditional fields of education.

2.4. In-service training of teachers (chapter 5)

In-service teachers and their supervisors who are currently working in those classes and schools in which population education is to be introduced must be adequately prepared to introduce and maintain the instruction in this new area. To attain this necessary level of competence, special preparation is usually required. The extent and character of their preparation will depend in part on the complexity of the innovation, as regards both the new methods and the new content.

The number of teachers to be trained would be influenced by the decisions on the grade levels in which population education is to be introduced, and whether the content is to be integrated into one or more existing subjects or taught as a separate subject. For example, once the experimentation or pilot phase is finished, and a decision has been taken to introduce a progressive programme covering all levels in the primary school system, then all primary teachers would need to be trained. On the other hand, if the content is to be integrated into only one or two subjects in only the middle school or high school levels, the teachers concerned would be much more limited in number.

Decisions have to be made on whether special teachers' guides and materials are necessary for the training of in-service teachers, or whether student materials are sufficient to meet training needs. In addition, the strategy of diffusion throughout the school system may hinge, in part, on the lead-time required for the preparation of in-service teachers and the pace at which the innovation is to be introduced.

The basic approach used to develop a plan for teacher training (whether in-service or pre-service) consists, in essence, of the following steps :

- identify the desired 'profile' of teachers - the complex of knowledge, attitudes and methodological skills required for teachers to do a good job of teaching population education ;

- identify the current profile of these same individuals ;
- develop a training course to fill in the gaps between the current and the desired profile, i.e. a course which provides adequate opportunities for the teachers to learn the knowledge and to discuss, experience and practise the attitudes and skills.

In developing an in-service teacher training plan, as in developing curriculum, several of the characteristics which distinguish population education from other educations need to be actively considered. For example, most teachers have relatively little experience in focusing on values, in using participatory teaching methods, and in helping evolve parental and community understanding and support for an issue which may be perceived by some as controversial. It is these and similar factors which form the crux of population education, not its cognitive component. Unless teacher training focuses on these types of topics, it is not preparing teachers adequately for population education.

2.5. **Pre-service teacher training** (chapter 6)

Pre-service teacher education is necessary in order to ensure that population education programmes are not interrupted as new teachers enter the teaching force. Since, within the education ministry, teacher training is usually the responsibility of a different sector from the population education programme, the establishment of a pre-service programme is a very different task from the provision of in-service training to current teachers. The trainers for a short-term in-service training programme may be prepared for this task by the population education staff themselves, but the training required for faculty members of a teacher training institution to assume the responsibility for population education as an integral part of the pre-service preparation of teachers is usually much more extensive. Similarly, the curriculum of the pre-service institution has to be modified in some manner to

accommodate this change - also a more extensive task than developing curriculum for a brief in-service course. Frequently, the process of decision-making for such changes is very different at this level, especially where individual institutions of higher education retain considerably more independence than those at primary and secondary level.

Content and methodological factors to be considered in developing the pre-service programme are essentially similar to those for the in-service programme. The major difference is that teacher trainees are younger and do not yet have either the teaching or the life experience of existing teachers. On the other hand, this can be partially overcome by being able to devote more time to population education in the much longer pre-service course.

2.6. Programme management (chapter 7)

In most population education programmes, the centre from which activities are planned and directed is a population education unit, located within the ministry of education. In some instances, this unit contains only a very small number of personnel, and must rely on the various other units of the ministry to implement its activities. In other instances, the population education unit has sufficient personnel itself to perform many of the implementation tasks, calling upon others only in occasional supplementary roles.

In all instances, the leadership of the population education unit has responsibility for overall management of the complex series of activities which form population education. In essence, the purpose of this management function is to ensure that each discreet activity occurs in the right quantity, at the right time, is of acceptable quality, and of reasonable cost. Another way of perceiving management is that it deals with three types of **resources** - people, facilities and funds - through a series of **functions** - planning, training, supervising, personnel management, material production, logistics, budgeting and evaluating.

The first issue in a population education programme is the overall management of the unit which implements the programme. Most such units - especially where there is a fairly large staff - are divided into a series of sub-units (e.g. for curriculum, training, research/ evaluation, administration). Allocating personnel, material, financial and time resources among these sub-units and ensuring their coordination is a major focus for the head of any population education unit.

But this does not represent the totality of programme management. There are many other functions, usually performed largely by the head of a population education unit, including :

- coordinating with other government and private agencies, both within and outside the education ministry ;
- optimizing inputs to the programme by personnel from universities and similar institutions (as trainers of trainers, researchers, innovation-suggesters, etc.) ;
- ensuring that changes in national policies, updates of population data and results of relevant studies are rapidly brought to the attention of the programme staff ;
- managing any external inputs, including technical assistance, training, equipment and funds ;
- optimizing the ability of the programme to learn from population education activities in other countries (via exchange of materials, publications, international seminars, etc.) ;
- preparing and following up new requests for external assistance.

2.7. Monitoring population education programme progress and improving their quality (chapter 8)

In virtually any educational effort, it is always desirable to look for ways of improving both the process and the impact : population education is no exception. Aspects of a programme in which improvements might be made include everything that the programme does.

This may range from relatively narrow changes such as modifying the wording of a paragraph in a student text, hiring an extra driver, or adding colours to a set of posters used as teaching aids to far more basic changes such as introducing distance learning approaches instead of face-to-face teacher training, restructuring the internal organization of the population education unit, or deleting population education from the mathematics curriculum.

Written programme objectives, sub-objectives and workplans provide the structure within which any type of evaluation is meaningful. This applies to evaluation performed through an informal checking process, or an ongoing monitoring process or a focused, formative study ; it also applies to a more substantial evaluation performed through a major, summative study of the population education programme's impact. In any type of evaluation, it is necessary to know what one has been **trying** to achieve in order to assess the extent to which it has been achieved.

Whether formal or less structured, evaluation is an important aspect of any population education programme. Special staff may be assigned for this purpose, or existing staff from other sections of the ministry may be called upon.

Evaluation is only the first step in a two-step process. When one knows how well objectives are being achieved, one can then proceed to the next step - programme **change** (which hopefully means programme **improvement**). Two very different types of programme changes are always possible - changing the **means to achieve the existing objectives**, and changing **the objectives themselves** (and then establishing appropriate means to achieve these new objectives). This step is less amenable to objective, quantifiable approaches than is the evaluation step ; the most common approach used is discussion of the evaluation results among programme staff and others, then decision on programme changes (using whatever decision-making processes are traditionally employed).

2.8. Transition to an integral part of the school programme (chapter 9)

Population education programmes usually begin by preparing curricula and undertaking training activities which are separate from the normal, standard school materials and teacher training activities. This may be desirable when the topic is new to everyone and feasible if special financial arrangements are made. However, eventually these distinctions between population and other content areas are expected to end through full integration of population content into the regular school programme.

At that stage, population education will become a regular feature of the school curriculum with all of the normal support arrangements which characterize any other component of the curriculum, such as history or health education. Teacher training institutions will include population education as a regular component of the pre-service training of teachers. Other support activities, such as supervision and research, will be included within the assignments of personnel who normally perform these responsibilities. If there are any special requirements for the maintenance of population education (such as the need to ensure that new population information is included in curriculum and teacher training), provision can be made to meet these needs. When these issues have been resolved, institutionalization of the innovation within school education will have been attained.

In many instances, population education programmes have made a concerted effort to employ innovative teaching methodologies. In integrating population education into the regular programme, special care must be taken to ensure that these more participatory methodologies not only are continued, but are increasingly applied to other content areas which can benefit from them.

In addition to institutionalizing population education within the school education sector, there is also a need to ensure that it will

be integrated into other educational activities as part of the lifelong educational opportunities open to all individuals. To complement its inclusion in lifelong education programmes, population education requires continuing, formal and informal mechanisms at leadership and community level for support and improvement of both school and non-school activities. Only then will this innovation finally have achieved a complete transition to its being a fully integrated aspect of education.

Part Two

Issues and National Actions

Chapter 3

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Indifference or opposition to population education by some policy-makers

In many countries, the initial interest in and support for population education comes from a small number of people who perceive it as a potential means for addressing some of the country's population or other development problems. These people may be within the education ministry, although just as frequently they are in other positions more concerned with development than with education.

As with any potential innovation, initial reaction to it will vary. Once a few individuals in the education ministry are convinced that population education should be introduced, and suggest this to others, they usually discover a wide range of responses. First reactions by high-level policy-makers (as well as by others further down in the system) frequently range across the entire continuum from strong support to strong opposition.

Some are very much in favour of it, viewing population education as a way of attacking some of the country's sociological, demographic or other problems, or as a vehicle for introducing better teaching methodologies or other educational reforms. Others are indifferent or mildly opposed, perhaps perceiving population education as a nuisance, simply another burden on an already-over-burdened school curriculum. Still others may be mildly opposed to population education because they consider some of its objectives too ambitious to assign to a school programme.

On the opposite end of this continuum, a few policy-makers may initially have much stronger negative reactions. Frequently, these negative reactions are based on a misconception of the intent of population education, with people perceiving it as an attempt to teach culturally unacceptable topics.

In most countries, there are likely to be some policy-makers with each of these initial reactions to population education. Before beginning the implementation of any activities, it is necessary at this level to develop a consensus on the desirability of this innovation, to overcome indifference or opposition to it. Population education, like any new programme, requires the general support of key policy-makers to be successful.

Any approach to overcoming indifference or opposition needs to be based on an understanding of the various reasons why people give it less than enthusiastic support. Strategies can be devised for each of these reasons, consisting either of changes in the plans for population education activities (where the objection to it is considered to be valid) or arguments and actions to motivate those who view it less than favourably.

How have educators and others addressed this issue ? Most commonly, by conducting a national meeting to discuss the concerns of high-level policy-makers.

Action 1 : Conduct a national seminar

In the **People's Democratic Republic of Yemen**, for example, the in-school and the out-of-school population education projects were scheduled to start in July 1980, but some high-level officials continued to be indifferent to it because of their lack of experience in this field. With the assistance of the Regional Advisers, a one-week planning meeting was held to sensitize to population education the high-level officials from the government agencies involved in project imple-

mentation. The meeting was attended by 37 officials of the Educational Research Centre, the Higher College of Education, the Ministry of Education, the Teaching Media Institute, the Ministry of Local Governments, the Directorate of Statistics and the General Union of Yemeni Women. During the meeting, the concepts, content and methodology of population education were presented to the participants, and four commissions were set up to deal with :

- the definition of population education for the country ;
- the contents of population education ;
- the methodologies of population education ;
- out-of-school population education.

The planning meeting not only resulted in starting the population education project, but also paved the way for the implementation of some of the project's activities. This process was a key factor which helped begin population education activities in the country.

How to ensure that the programme has been carefully and clearly conceived at the project formulation stage

In many countries the initial implementation of population education activities is supported in part by financial and/or technical assistance from external agencies. Frequently, this means that the first attempt to **plan** the population education **programme** coincides with the planning of the **project** for donor assistance.

At this stage, population education is usually still a relatively new topic for most people in the education ministry. Even those who favour its inclusion in the school programme may still have an unclear idea of : the scope of its content ; the extent to which linkages with

other ministries and private agencies would be desirable ; the type and duration of training needed by project staff, teachers, and others ; the size of project staff required ; whether special payments should be made to project staff ; and numerous other factors for which decisions are needed in the planning of the programme.

When planning an externally-supported project, there is always a danger of locking the programme into commitments which later, in hindsight, one concludes were mistakes. Sometimes these mistakes are very difficult to rectify.

Many countries have taken actions specifically designed to ensure that the initial population education plan considers all relevant factors. Most commonly, this process includes one or more national-level meetings to ensure that relevant inputs from a wide spectrum of individuals and organizations have been included. Such planning meetings may, in fact, be identical to the population education motivational seminars described above for a different issue. In fact, frequently a single action taken by a population education programme is aimed at overcoming two or more different types of obstacles - a form of efficient use of resources which all programmes should encourage.

Action 1 : Organize a national planning and development meeting

In **Nepal**, a national planning and development meeting was organized in February 1979 with the following main objectives :

1. to understand : (a) the concept and nature of population education and (b) other population education programmes in Asia ;
2. to review the existing population education projects initiated by various agencies in Nepal ; and
3. to develop guidelines for the formulation of a national population education programme for both in-school and out-of-school.

Altogether 29 participants representing 16 different organizations attended the Meeting. These were : Ministry of Education ; Curriculum, Textbook & Supervision Development Centre ; Centre for Educational Research, Innovation and Development ; National Planning Commission ; Central Bureau of Statistics ; Nepal Family Planning Association ; Nepal Family Planning & MCH Project ; Department of Agriculture ; Department of Labour ; Panchayat Training Centre ; Social Services National Co-ordination Council ; Woman Services Co-ordination Committee ; National Population Commission ; Curriculum Development Centre (TU) ; Institute of Education ; and Regional Educational Directorate, Central Region. In addition, there were observers from ILO and UNFPA.

During the first two and a half days of the Meeting, papers were presented on:

. Population Education - Nature and Status
. Population Education - Formal and Non-formal
. Effect of Population Growth and Need for Population Education in Nepal
. Population Education and Formal Education System
. Population Education for Out-of-School Youth and Adults
. Population Education & Agriculture
. Educational Strategies for the promotion of Population Education

After discussion of papers and general orientation about population education, the participants were divided into two groups : formal education and non-formal education. Both groups discussed and prepared reports which were presented in the plenary. Each group report was organized in two sections :

- assessment of needs and requirements ;
- strategies for implementation of population education programme.

The needs and requirements were identified under five categories, viz: (a) awareness, (b) curriculum and materials development, (c) training of personnel, (d) research and evaluation, and (e) communication. The strategies for the implementation of the population education pro-

gramme in the formal education sector were suggested under the same five categories, whereas for the non-formal education sector, they were suggested under : (a) integrated approach, (b) strengthening services, and (c) communication support. The needs and strategies for coordination between the formal and non-formal population education programmes, and for establishing a population education information network were also identified.

Both reports included practical suggestions for launching population education activities, including a suggested institutional framework for the implementation of the national population education programme.

Action 2 : Develop a two-stage process of programme planning, in which ideas are first elicited from a wide spectrum of individuals, then filtered through and finalized by a high-level ministry planning team

The involvement of the concerned **Zambian** nationals in initial programme development took place at two levels : (a) through participation in a national seminar ; and (b) through a working group of top-level education ministry officials.

It was decided that the development of a national population education programme should be preceded by a national seminar, drawing people from all walks of life, to discuss thoroughly and make recommendations regarding immediate and long-term programme development. This two-day seminar brought together a cross-section of concerned Zambians and such special interest groups as religious organizations, parents, women's organizations, voluntary organizations, politicians, Government Ministries and para-statals.

They discussed and recommended actions on many issues, including the project's objectives, title, background information (particularly Zambia's population issues and problems), institutional framework, levels of insertion, subjects, co-operating agencies and the kinds of co-operation expected of them, and government inputs. As resource persons during the seminar, Unesco and UNFPA personnel provided guidance to help participants perceive the population education programme in Zambia's context and to discuss exhaustively all its immediate and long-term ramifications.

Then, during the actual formulation of a project for external assistance, top-level officials of the Ministry of Education participated in the discussions and drafting of the project document. These officials included the Minister of Education, the Principal Secretary in the Ministry of Education, the Deputy Chief Inspector of Education, the Deputy Director of the Curriculum Development Centre, the Co-ordinator of Social Studies Curriculum, and the Senior Curriculum Development Officer (Evaluation). These high-level ministry officials participated fully until the draft document was completed.

Thus, through this two-dimensional participation, the various aspects of the programme - to the extent that they could be foreseen at this stage - were thought through as carefully as possible before any activities were started. The approach of beginning with a large meeting, representing a cross-section of the public, followed by project formulation by key officials of the Ministry of Education ensured that all relevant factors were taken into consideration.

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In **India**, this two-stage process comprised State-level planning leading to a national-level programme. Four regional workshops were organized in March-April 1979 in Pune, Chandigarh, Gandigram and

Patna. At these workshops, the States were represented by high-level officials from their Ministries of Education, Institutes of Education, Bureaus of Secondary Education, Secondary Teacher Training Colleges, Primary Teacher Training Colleges, and High Schools ; there were 100 participants in all.

The programme of the workshops consisted of about two days orientation about population education and three days of group work. During these workshops, each State was assisted in developing a draft State proposal which they officially forwarded after due modifications to the Ministry of Education, Government of India.

The proposal for the National Population Education Project was then prepared for a three-year period. It was based on the draft proposals prepared by each State plus a baseline survey which had been conducted by the National Council of Educational Research and Training. During the four workshops it was found that all the States were not equally ready for launching population education programmes. It was, therefore, decided that the States would join the National Population Education Project on a phased basis, according to their level of preparedness - ten States from April 1980, nine States a year later.

A second round of three workshops was organized in September 1980 for the nine States in phase two. In these meetings, the participants were given a brief orientation about population education, followed by preparation of draft project proposals. Another round of meetings with these States was organized in New Delhi in October 1980. The participants had been asked to discuss the draft project documents with the concerned officials/ministries in their respective States ; the revised drafts were discussed and finalized at the meetings in New Delhi.

This strategy ensured full commitment of each of the participating States in the National Population Education Programme.

Action 3 : Prior to the formulation of the project, organize a visit to another project in order to familiarize key officials with opportunities, possibilities and difficulties

Three key officials of the Ministry of Education of **Nicaragua** visited a project in El Salvador which had been functioning for three years. This two-week visit occurred before the formulation of the project in Nicaragua and helped these officials to gain a fuller understanding of the different stages comprising a population education project. They became familiar with the connections between stages and the most common problems encountered during development, and discussed strategies to overcome them. These officials subsequently participated in the formulation of the project and at present one of them is the National Coordinator.

Additional comments

Most of the population education programmes from which information has been available for this study began their operations at least five years ago. In many instances, the individuals who played key roles at the design and formulation stage are no longer actively involved. Thus, despite the critical importance of this element, and despite the fact that innovative actions were taken in a number of countries, there are few issues and actions which have been reported to us.

There are many other issues not mentioned here, which one might include in this element, issues which are known to have been difficult in one or more countries. A few of these are :

- lack of a clear national development or population policy ;
- how to ensure that an appropriate number of qualified staff are assigned on time to the project ;

- how to accommodate the requests of project staff for supplementary payments without creating precedents which will later endanger the programme ;
- how to deal with a gap between the formulation of an externally-funded project and the actual arrival of this support.

In addition, at this stage in the development of the project, there are a number of very basic programmatic decisions which need to be made, such as content, grade, subject, mode of inclusion, etc. (see section 2.2.3). These decisions are usually made at a policy level, by individuals with considerable overall experience but very little population education experience. How can a programme-to-be optimize the quality of these decisions and, simultaneously, ensure that the programme staff will review and revise them at a later date ?

Beginning a national population education programme is a major responsibility. Alternative approaches need to be considered very carefully before any activities are implemented.

Despite the brevity of its history, population education has already developed its own 'traditions' - patterns of programme action which recur from country to country. For example, in virtually all population education programmes, the first major implementation activity consists of national-level curriculum development ; this is usually followed by face-to-face in-service training of at least some teachers, organized by national authorities. But there is no requirement that population education be implemented in this manner. The same resources - or even fewer resources - might, for example, be better spent at the regional or district level rather than the national level, with each region or district instructed to use the resources however they believe best to achieve national population education objectives. Or, perhaps some of the national population education objectives could be better achieved through a non-pedagogical approach.

The purpose of this discussion is not to discourage people from starting population education, but rather to encourage them to do so with an open mind. No approach should be used simply because that is the way similar things have always been done. Population education as a programme is in itself an innovation ; the overall structure of any population education programme, as well as its various aspects, may also be implemented either traditionally or innovatively ; the latter should be encouraged.

National population education leaders may wish to review other educational innovations before committing their country to population education approaches which may later be difficult to alter. A recommended source for this purpose is :

Havelock, R.G. and Huberman, A.M.,*Solving Educational Problems : The Theory and Reality of Innovation in Developing Countries,* Unesco, IBE, 1977.

Chapter 4

Curriculum and Materials Development

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Limited availability of adequate background data on population issues for initial curriculum development

Most primary and secondary school subjects are direct reflections of the recognized intellectual disciplines (such as mathematics, history, language), and derive their content from the body of knowledge accumulated by these disciplines. Population education does not have such a luxury, such a simple method of deriving its **knowledge base** - the overall content from which curriculum developers can extract material which they consider appropriate for different groups of students. The content of population education must come from several different academic areas, such as demography, sociology, psychology, history, biology, ecology and others. In many instances, the population-related information in the existing books and documents is difficult to extract from the other content of these disciplines. In other instances, this information is not on paper at all, although specialists may have unwritten knowledge concerning the relationships between population factors and their own disciplines' more central concerns.

It is extremely rare that a country will have one or a small number of sources where one may find this information already in a consolidated form. But it is such a consolidated source that curriculum writers require if they are to begin the process of preparing curriculum materials which accurately reflect their country's population situation and trends.

To be most useful, such a **sourcebook**, or reference book, should be both **comprehensive** and **selective**, covering all relevant topics, but only to the depth really required. To be comprehensive, it needs to include information of many types - qualitative as well as quantitative - drawn from the existing 'sources' of understanding of population issues, i.e. the various academic disciplines. The sourcebook should include, but be much more than a compilation of demographic data : much of population education requires a deep learning, an inter-

nalization of values, attitudes and skills which are only peripherally related to population numbers. Clarification of the types of non-demographic information to elicit for this book is one of the first and most important tasks in its planning.

Being selective is the second major characteristic of a population education sourcebook. The individuals who make the choices concerning which concepts to emphasize, and which data to include or exclude, need to have in mind the expected curriculum development process, including the objectives of the programme at all levels. The writers of the curriculum will require background materials which go into somewhat greater depth than the materials they will prepare for students. At the same time, the sourcebook should not be so complicated that it confuses rather than assists the curriculum developers.

Only when all this information is brought together where it can be perceived as a single entity will the proposed curriculum writers be able to fully comprehend the intellectual **scope** of population education, as well as the **multi**disciplinary and **inter**disciplinary nature of their assignment. But, at the start of most population education programmes, such a sourcebook does not exist. Given this constraint, one might consider having the curriculum writers themselves research existing documents and interview specialists in order to prepare their working sourcebook. Such an approach, however, is considered inappropriate because curriculum writers are usually specialists in school subjects and are unlikely to have the population and multidisciplinary expertise required to gather, extract, then consolidate all this information.

Most existing population education programmes have dealt successfully with this issue. The actions they have taken fall generally into two categories - sourcebook development by a number of local experts from different fields, and supplementary studies and other activities to obtain specific types of missing information.

Action 1 :	*Through cooperation with government and private agencies, consolidate existing written and unwritten materials and ideas concerning the relationships between population and factors such as health, agriculture, employment, etc., into a national sourcebook*

At the initial stage of the Sierra Leonean project in 1977, the project staff organized a national seminar attended by primary and secondary school teachers of social science subjects, university personnel, principals of secondary schools, policy-makers, educational administrators, teacher educators, officials of the Ministries of Education, Health, Housing, Agriculture, Natural Resources, and members of the general public. Some of the objectives of the seminar were to identify and recommend programme objectives and concepts in population education for inclusion in the population education curriculum, and to generate the data required for curriculum materials. Therefore, sectoral/development Ministries were invited to present papers indicating the interaction between population and their sectoral concerns.

Among other things, the seminar participants recommended the integration of population education into the social studies curricula for the secondary school classes I, II and III through the adoption of a unit approach. Based on the materials produced during the seminar and supplementary data from other sources, the final materials were developed around six topics or units to form the main content base :

- origin, development and characteristics of man through time (which included the concept of population, physical and physiological characteristics of man, the idea of population growth);
- Man's environment (which included conditions for the location of human populations ; the concept of migration ; ecological balance ; and the determinants of population change) ;
- Man's culture (which included his institutions, family, life cycle, cultural beliefs, famile size, etc.) ;

- population and resources (which included basic family needs ; relationship between the population and resources in Sierra Leone ; demography of Sierra Leone ; dependency burden, etc.) ;
- communication in the service of man (which included the use of communication to collect vital information, population census, vital registration, social surveys, etc.) ; and
- global issues (which included the interdependence of nations, underdevelopment, poverty, urbanization, the problems of the youth ; attempted solutions at international levels).

Subsequently, pupil texts and teachers guides were produced on the basis of the above materials.

This approach illustrates the use of a multi-purpose seminar, which not only served as the focus for the gathering and organizing of a sourcebook, but also made other basic recommendations concerning the development of population education curriculum.

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In **Somalia**, some population data existed at the outset of the population education project, but it was not compiled in any one ministry or document. It was not available in organized form, sufficient to meet curriculum development needs. Most Ministry personnel had never given much thought to population issues, even in terms of how these issues affected their work. Since some of the project staff had received demographic training, and a resident adviser had provided additional training to all of the central project staff, they were able to work with personnel in the Ministries of Agriculture, Health, Labour, Livestock, Forestry and Range, the Water Development Agency and others to help them organize available data and document their experience. The documentation subsequently took the form of chapters for a resource book which related population issues to each sector of development in the country. The book then became the basic background document

for a national population conference in which all of these ministries and others participated. This data-collection exercise served several purposes :

- it helped the development sector specialists to think in terms of population in their own fields - which presumably enhanced their expertise and their work. It certainly increased their awareness of and interest in population issues ;
- it prepared many of the participants in the national conference to identify and discuss national population issues as these related to their work ;
- it helped the participants understand the role of formal and non-formal education processes in dealing with these issues or problem areas, and the need for their support of the new national population education project ;
- it provided much needed basic data for the development of relevant country-specific population education curricula and material.

Note in this example the emphasis on sourcebook development being a two-way street - not only providing the information needed by population education curriculum writers, but also providing other government ministries with a greater insight into their sectors' own concerns.

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In **Nepal**, a national sourcebook on population education was prepared under the national population education project. A meeting of experts from Tribhuvan University, the Ministry of Education, the Curriculum Development Centre and other related departments and ministries was organized to decide on the format, scope and content outline of the sourcebook. A member of the Unesco Regional Advisory Team was also invited by the Government to participate in the meeting and share experiences of developing national sourcebooks in other countries in the Asian region. The writing of the materials on different topics

was contracted to selected experts in various departments and ministries. The draft of the sourcebook was discussed and finalized in a meeting of authors and other experts.

The sourcebook consists of seven units :

Unit I - an introduction to the need and importance of population education, the objectives and use of the sourcebook ;

Unit II - the conceptual framework for population education, status of population education, the various demographic concepts and measures such as size, composition, density, fertility, mortality, migration, distribution and population growth ; the definition and various themes of the quality of life and human sexuality and family planning ;

Unit III - the demographic trends in Nepal and selected countries, projection of population change and factors of demographic change ;

Unit IV - the interrelationship between population growth and development such as socio-economic development, cultural aspects and environmental aspects ;

Unit V - the population policies and population education programmes both in Nepal and other countries;

Unit VI - the various pedagogical aspects of population education such as curriculum development, training, teaching methods, evaluation and research ;

Unit VII - the list of sources and resources, including relevant tables, charts, graphs, selected bibliography, agencies involved in population programme and others.

The sourcebook was used as one of the reference materials for the development of curriculum and instructional materials. Most of the demographic, economical, pedagogical and other data for preparing the sourcebook were available within the country.

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In **Sudan,** members of the curriculum unit surveyed the population concepts included in the school textbooks. They noticed that many population concepts were lacking or presented in an inadequate way. To obtain the information on which to build the curriculum to fill this gap, two main actions were taken : one was a socio-cultural case study, the other a national conference and the development of a source-book.

A National Conference on Population, Education and Development, with 140 participants from both the government and private sectors, was held in 1982 under the auspices of the National Population Committee, of which the director of the population education projects is a member. Prior to the conference, specialists from different fields were contracted to prepare and present the following papers :

- The use of population data for development planning
- Integration of population in development planning
- Population and food supply
- Population, health and development
- Mortality levels and differentials in the Sudan
- Socio-economic differentials of child mortality
- Sudan fertility survey
- Family planning services in the Sudan
- Integration of family planning survey into the health care system
- Rural population distribution : some implications for Sudanese agriculture
- City rise and growth
- Socio-economic and demographic effects of refugees on Sudanese society
- Integrated population welfare programme
- Participation of women in development

These papers were discussed at the conference, and published. Then, building upon this document - but also incorporating information from the census and other sources - the Faculty of Education from

the University of Khartoum prepared the national sourcebook. Curriculum writers had access to both documents when they prepared the secondary school curriculum.

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Some of the key points noted in one or more of these examples are :

- involve other government ministries as well as the education ministry, plus private agencies, and private individuals ;
- invite or contract specialists to prepare papers on the relationships between population and their speciality ;
- have population education programme staff serve as 'advisors' to these specialists, to assist them to focus on the interrelationships with population ;
- present and discuss the papers at a national conference ;
- have this conference serve several different population education related purposes, not solely for sourcebook development ;
- use external assistance (e.g. Unesco Regional Advisor) to learn of other countries' experiences with sourcebooks ;
- use a two-stage process, with papers presented at the conference as the major - but not the only - input to a sourcebook.

In addition, although not directly related to curriculum development, the process of involving specialists from other fields has a side effect : these people learn more about population and about the role of education in promoting the concerns of their own agency.

Action 2 : Identify the more important gaps in the knowledge base required for curriculum development. Have project staff or others conduct studies or other activities to obtain this information as rapidly as possible

For a general reader, it is very difficult to obtain all relevant information needed to enhance his understanding of the society in relation to population. An almanac is a collection and collation of statistics on different aspects of social life, both during the past and projecting into the future. In addition to its national sourcebook in population education, **Bangladesh** prepared such a **sociological almanac.** This is a special kind of reference handbook intended to make available to students, administrators, trainers and teachers a selection of social statistics to appreciate better the structure of their society and the emerging social trends, as well as social problems connected with population. It is an annotated handbook of social statistics containing maps, graphs and diagrams on the following subject areas : ecology, population, social data, education, economy and occupations, transport and mass communications. The primary goal of this handbook is to widen the horizons of a population education professional - to help him understand population issues better in the light of the multi-faceted socio-economic situation of the society.

The almanac was prepared with the help of university professors and experts from other relevant departments and ministries. Although this was planned to be prepared in the beginning of the project, it took some time to bring out this publication. However, it was used as one of the reference materials for developing different instructional materials in population education. It is now in the process of revision.

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In the **Philippines**, a series of small community **studies on population learning among youth** was developed by the Population Education Program. The primary aim of the series was to provide population educators, policy-makers, curriculum planners, and textbook writers with folk demography and data for use both in the initial national curriculum development and in revisions at the local level. The studies focused interest on informal learning of and communication of concepts to the child as a part of growing up in the particular culture to which he belongs.

There are six monographs in this series, with each focussing on a different cultural or ethnolinguistic sub-group. Each of the monographs answers the following questions in the context of a farming community, fishing village and town centre :

- what population-related matters do young people know ?
- where did the knowledge come from ?
- how was the knowledge communicated to them ?
- how does this knowledge influence attitudes and behaviour?

The modules also provide the policy-makers and curriculum developers with implications and guidelines on how these data can help improve their work. This anthropological investigation has added a new dimension to the study of population education.

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For **Sierra Leone**, additional data was needed and could not be obtained satisfactorily from the then unanalyzed census of 1976. Thus, before developing the curricula, **questionnaires** were sent out to secondary schools to get an overall estimate of ideas about population, family life issues and the content of population education. Visits were made by the project staff to **interview teachers** as well, especially those who had not participated in the earlier national seminar, to obtain their views on the subject and to determine the selection of teachers for attachment to the project. A few **parent-teacher associations** were also addressed and their opinions and ideas invited. The information gained through these sources indicated doubts about the

relevance and content of the course but guided the choice of materials and the selection of pilot schools.

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A different approach was used in the Sudan. A **socio-cultural case study** was designed by a demographer-geographer and a sociologist based on a research instrument developed by Unesco Headquarters. A consultant played a leading role in the formulation of the questionnaires, the design of the sample and the training of researchers chosen from the Departments of Geography and Anthropology at the University of Khartoum.

The socio-cultural case study covered six regions of the Sudan. This research made available valuable data regarding the socio-cultural changes caused mainly by migration and education and the socialization processes. Many population education concepts used in the curricula were derived from this study.

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Two types of formal studies - one of population learning among young people, the other a broader socio-cultural study - are described in these examples. Another approach to supplementing the information required for curriculum development is a sociological almanac with statistical information. Finally, the fourth approach is far less formal - a series of focused interviews with teachers, parents and others.

These approaches were used to obtain supplementary information required for curriculum development. The types of information ranged from folk demographic concepts to perceptions of youth, parents, teachers and community leaders concerning population factors to national statistics on sociological issues related to population.

Action 3 : Assess students' and teachers' knowledge of and attitudes on population issues via formal survey studies

Among the data required to begin a population education programme is the knowledge and attitudes of the prospective key participants in the programme - the teachers and students.

Many countries in the Asian region have conducted studies of students' and teachers' knowledge of and attitudes on population issues. For example, in **Bangladesh**, the Population Education Project conducted a study whose objectives were to assess the level of knowledge of population facts and attitudes on population issues and problems of class IV-XIV students prior to their exposure to classroom teaching in population education.

Stratified random sampling was used, beginning with one thana (sub-district) from each district of the country. Four primary schools, two high schools and one college from each thana were selected. Three students from each class of the selected educational institutions were again randomly selected, making a total of 1,196 respondents from all levels. The sample was further subdivided into four groups of classes, with each group of respondents being given a slightly different set of questionnaires. Frequency distribution, percentage and mean scores were used to help analyse the data.

Another study on teachers' knowledge and attitudes towards population education and population issues (including the practice of family planning) was conducted by the Population Education Project. The objectives of this study were : (1) to assess the knowledge base of teachers on population facts and related problems prior to their exposure to the training programme and subsequent classroom teaching ;

(2) to assess the attitude of the teachers towards population issues and the population education programme prior to their exposure to the training and subsequent classroom teaching ; (3) to assess the opinions of the teachers regarding ideal family size and the extent of their adoption of family planning measures.

Processes of sample selection, questionnaire development and data analysis similar to the previous study were used.

The findings of both these studies were used in the development of curriculum and materials for students and teachers.

Lack of experience with interdisciplinary content in a discipline-based curriculum

For most curriculum specialists and secondary teachers, the bulk of their formal training and teaching experience is within a single discipline. The academic discipline-based school subjects virtually require that this be true, since an individual is hired to be a 'math teacher' or a 'social studies curriculum developer' ; it is extremely rare to have someone in a multi-specialist role.

The academic disciplines at tertiary level tend to continue and extend this separation among the different portions of knowledge.

At the other extreme, most students in population education programmes - and most of their parents - have not learned to see their world sectorally : their world contains thoughts, feelings, and actions - not 'agricultural' thoughts or 'religious' feelings or 'health' actions. They tend to take a holistic view of all things, whether these be in the formal school or in the outside world.

The content of population education curriculum is, obviously, drawn from a number of academic disciplines. But each of the various problems which the curriculum addresses does not usually fit clearly within only one discipline or school subject.

Thus, there is a dilemma : the content of population education plus students' experiences and ways of thinking **are not** discipline-based ; school structures plus teachers' and curriculum developers' experiences **are** discipline-based. What should they do ?

In most instances, population education programmes have opted for the simple solution : they have adopted a **multi**disciplinary approach, with curriculum developers from each subject area preparing curriculum independently of each other. In most programmes, there is **some** communication among the various curriculum writers, occasionally some reading of each other's products. Nevertheless, the end result still is usually population curricula which fit conveniently into the existing school subjects.

In a few countries, there have been some attempts to go beyond a **multi**disciplinary to an **inter**disciplinary approach. In this type of curriculum, teachers and students are forced to think holistically, to break out of the confines of a single discipline in dealing with a population issue. It is more difficult, but is also more a reflection of the students' reality.

Action 1 : Expose curriculum developers to case studies which only can be solved through an inter-disciplinary approach

In the **Dominican Republic**, a one-week seminar was organized for the personnel of the Department of Curriculum. Problems of a complex nature, such as under- or mal-nutrition, pollution, abortion,

and parental abandonment were approached through case studies which were based upon either a natural or a social science perspective. This always led the group to partial or incomplete solutions. After having realized this fact, the group saw that the main problems of the modern world are not the sole competence of one single discipline.

The seminar also emphasized that learning could be an interesting enterprise for both the teacher and the student when it focuses on real problems which are important to the student.

The fact that learning should not be a compartmentalized process became evident. Studying one aspect of a problem today in social science, another aspect of it next month in mathematics, etc., does not result in as clear an understanding of the whole idea as would an integrated study of the entire problem. The case study approach helped consolidate this understanding for the seminar participants.

Since, at the time, internal seminars were not a common practice to update the personnel of the Department of Curriculum, the seminar itself was considered to be a refreshing event and was welcomed by all personnel. Also, having been educated through traditional methodologies and contents, the new approach of using case studies which combined disciplines produced a positive influence.

There is evidence that the seminar produced positive results in the fact that there has not been any opposition to the inclusion of population education topics in the curriculum, and participants in the seminar have subsequently cooperated with the project in several activities such as the development of teaching materials, curriculum design and teacher training. In the Dominican Republic, this kind of cooperation is important because the project is an independent department which has the same status as the Department of Curriculum. Nevertheless, study plans and programmes are the responsibility of the latter. Its specialists may accept, modify or reject the proposals of the population education project staff ; therefore, understanding and cooperation between the two are essential.

Action 2 : Offer an interdisciplinary course

Another approach to dealing with the interdisciplinary nature of population education was taken by **Thailand**, which recognized that this is not the only logically interdisciplinary aspect of the school programme. A separate course, entitled "Life Experiences", has been developed by the Curriculum Development Center and is being offered at the elementary level from grades 1 through 6. The course consists of the following units :

Unit 1 - Living organisms - ourselves, plants and animals
Unit 2 - Family life
Unit 3 - The environment around us (grades 1-6)
Unit 4 - The Thai Nation (grades 1-6)
Unit 5 - News Events and Important Days (grades 1-6)
Unit 6 - Energy and chemical substances (grades 3-6)
Unit 7 - Universe and space (grades 3-6)
Unit 8 - Occupation/employment (grades 3-6)
Unit 9 - Neighbouring countries (grades 5-6)
Unit 10 - Transportation and communication (grades 5-6)
Unit 11 - Population education (grades 5-6)
Unit 12 - Politics and Government (grades 5-6)

Concepts relating to population are integrated in Units 1, 2, 3, 4, 8, 9 and 10 - in addition to the independent unit on population education (Unit 11) in grades 5 and 6.

Treatment of controversial issues in the curriculum

It was noted in Chapter 3, 'The start of population education programmes', that one of the factors which distinguishes population education from many other educational innovations is the need to overcome active or passive opposition in order to begin a programme. Once this has been achieved, however, it does not imply that the factors which produced the initial opposition can then be ignored. Rather, it means that the locus in dealing with the issue shifts, first to the curriculum developers, then to teacher trainers and others.

A topic may be considered controversial for a school programme when it is thought to be sensitive, and there is disagreement within the society on whether it should be included in the curriculum. Such controversy is common in dynamic societies and should be perceived as an integral and desirable aspect of cultural change, as long as the disagreements are kept within reasonable bounds.

There is no simple list of the controversial aspects of population education. What is highly controversial in one country may be completely acceptable elsewhere. Cultural variations and policy differences on the topics with which population education programmes deal are enormous.

Although what is controversial in population education may vary from country to country, nevertheless there are common understandings concerning controversy itself, and concerning strategies which programmes might adopt in dealing with their own controversial issues.

One important characteristic of population education's controversial issues is variation within the country in support and opposition. Some people do not really care ; others have a mild opinion ; still

others may feel very strongly about their support or opposition. Frequently, those who feel strongly may express their views in an organized fashion, through a religious or social organization whose members hold broadly similar values.

An extremely important characteristic of the controversial aspects of population education is that frequently they are really **less** controversial than perceived. More so than for virtually any new educational area, population education seems to have much opposition which is based on people's fears of what they **think** the programme is doing rather than what it **actually** is doing. This misunderstanding of the basic purposes and methods of population education cannot be taken lightly, however : incorrect perceptions of reality can do much to harm a programme.

Once a population education programme team reaches a stage of developing its curriculum, there is much that can be done to treat controversial topics fairly and effectively. This is, in fact, potentially one of the most interesting and fruitful areas for programme staff to exercise their creativity. A wide variety of types of actions is possible. Nine are included here to introduce this broad scope of approaches population education programmes have taken in dealing with controversy in the curriculum.

*Action 1 : Develop support through adult programmes before introducing population education in the school curriculum**

In recent years, the Government of the **United Republic of Tanzania**

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* This and the following two actions are not directly related to curriculum, but are included here because their implementation is closely linked to curriculum decisions and the curriculum development process.

has become increasingly aware of population and family life issues and problems which merit systematic educational intervention. The Ministry of Education, while interested in introducing to the curricula new contents related to population and family life education, has been quite cautious because of the sensitivity of the moral or human sexuality aspects of the new subject matter.

To ensure public support, the government decided to introduce certain concepts in population and family life education, firstly with adult programmes of the folk development colleges, adult literacy, women's organizations and Tanzania Parents' Organization. Further, before introducing population education into the primary or secondary school curricula, the government plans to start the course initially at the Teachers Training Colleges, partly to enable trained teachers to conduct counselling in the schools.

Certain non-profit associations have been complementing the efforts of the government in creating awareness and understanding of population issues and family life problems of Tanzania in certain important social groups. These associations include, among others, the Christian Council of Tanzania, the Programme for Youth Education and Upbringing, and the Family Planning Association of Tanzania (FPAT). The FPAT, in May 1984, organized a national seminar for Parliamentarians during which the participants became more aware of, and recommended the introduction of family life education into the school curricula.

Action 2 : Learn the nature and extent of parental and teacher opposition to population education curriculum through a sample survey

In the **Philippines**, a study was conducted by the Population Education Program on the reactions of parents and teachers to potentially controversial topics. The purpose of this study was to : (1) determine reactions of parents and teachers to certain controversial content ;

(2) determine specific groups of parents and teachers who register opposition ; (3) determine specific areas of controversy in draft population education teaching guides ; (4) find out the reasons behind the objections ; (5) solicit suggestions on the appropriate age/grade/year level, when to introduce and how to teach the controversial topics.

The sample of 6,644 respondents (1,658 males, 4,986 females) was taken from two representative provinces and one city from each of the 12 Regional Divisions ; the sample included parents, elementary school teachers and secondary school teachers.

The study revealed that the majority of the respondents favoured the inclusion of the controversial topics in the school curricula. On the basis of this study a major topic on 'Sexuality' was included in the population education curriculum.

Action 3 : Organize a massive national campaign to overcome opposition

In the **Seychelles** project, in 1979, the Working Panel on Family Life Education wanted to introduce the subject of family life education into the upper primary school curriculum with a view to assisting in the reduction of a high incidence of teenage pregnancies. By 1980, the incidence of teenage pregnancy had risen to 26 per cent of all pregnancies recorded in that small island country. Before launching the programme, the Panel took into account a number of potentially major obstacles. These included the fact that (i) open discussion of sex was regarded as taboo in the country, and (ii) among the political leaders, opinion was still divided concerning teaching school pupils about human sexuality.

The Panel then thought that if they hoped to get the school programme accepted by the majority of the people, they would first have to sensitize the population at large concerning the incidence and consequences of teenage pregnancies in the country. In particular, certain key target groups were identified including parents, out-of-school youth, young adults at work, different religious denominations and policy decision-makers.

In preparation for the campaign, intensive training sessions were organized for those who would be used to carry out the actual campaign. These included groups of teachers, nurses, social workers, youth leaders drawn from the 23 electoral districts in the country. The sessions were conducted by the local resource persons and international consultants provided by UNFPA.

Following the training sessions, in early 1980 the Panel organized a mass sensitization campaign nation-wide on the theme of 'Teenage Pregnancies'. The campaign was animated in each electoral district by small district committees comprised of those people who had previously been trained. In addition, the Panel ensured that all available mass media (radio, television and the newspapers) covered or promoted the campaign fully. The campaign also included lectures and discussions on teenage pregnancies and consequences, use of drama groups and film shows, and question sessions.

The campaign revealed to the Panel the large amount of ignorance and/or misinformation among the people concerning sexual knowledge. It showed that, far from regarding sexual discussion as taboo, people were eager to learn about human sexuality. During the campaign a lot of people, including parents, recommended educating both the youth and the adult population about sexual matters. Similar sessions were requested on a regular basis.

As a follow-up, in 1981, a draft curriculum was prepared and the Education Ministry granted permission to pilot it in five primary

schools and in classes 7-9 (i.e. 12-15 year olds). After evaluation of content, teaching methodology, teachers' and students' reactions, the programme was introduced in all schools in the country at the levels of primary 7 to 9 by the end of that year.

One of the key points which this experience illustrates vividly is the **misconception** by high-level personnel of the actual values of their people. Frequently, in many countries, it has been observed that education ministry officials and curriculum writers omit topics which they themselves believe should be included because they fear that most people in their society would object to inclusion of these topics. In essence, the officials perceive themselves as more progressive than the average of their society when, in reality, the society is far less rigid than their perception of it.

Action 4 : Include controversial issues in an extra-curricular programme

In **Tunisia**, the students of the secondary education level receive some information about human reproduction from their teachers in the classrooms. But many of the sexuality issues perceived by the students are dealt with outside the class in the 'population clubs' of the secondary schools. There are many such clubs, for music, literature, theatre, etc. Membership in these clubs is strictly voluntary. In each of the population clubs, eight sessions are scheduled for the school year to deal with population issues including controversial issues. A list of these issues is presented to the students to allow them to choose those which they consider to be most important. A specialist is requested to present each issue and to discuss it with them, in the presence of an educator whose role is to animate the discussions. Audio-visual materials are often used to illustrate the issue presented.

In the population clubs, the students feel free to discuss the controversial issues, since the constraint imposed by the classroom atmosphere disappears. Through the population clubs, the students have learnt to deal with controversial issues which could not have been discussed as easily through the ordinary curriculum.

Action 5 : Involve active or potential opponents in the preparation of the curriculum

In part because of opposition by religious leaders who thought that population education would promote promiscuity, population education in the **Philippines** developed much more slowly in private than in public schools. This spurred the Population Education Research Utilization Project of the Population Center Foundation to launch a programme to promote greater participation of private schools in imparting population learning and to adopt effective techniques in integrating population education into the curricula of private schools.

To do this, first a survey research was conducted on the extent, manner and difficulties of implementing population education in the private schools. The report of the results of this survey emphasized implications for policy-making and practice.

As a follow-up of the survey, the Population Education Program prepared separate teachers' guides for the Catholic and Muslim schools with the help of teachers from these schools. Religious leaders are invited to speak on family planning and population issues in the classroom. Separate training programmes are organized for teachers from religious schools.

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In a **Colombian** project, the Catholic authorities were invited to participate in the development of the programme - its curriculum development, elaboration of teaching aids and teacher training. The invitation was accepted through the nomination of a representative who became a half-time member of the staff. The programme benefitted from his collaboration for almost one year, during which several Catholic schools also were involved in population education activities. After that period, the Church felt it was not necessary to have this type of involvement, since they realized the programme's conceptualization and developments were compatible with their religious principles and values.

Action 6 : Treat controversial issues indirectly

In the **Sudan**, sex education is a sensitive topic, rejected by public opinion which considers it as contributing to the regression of children's morals. Nevertheless, some of its themes are being taught **indirectly** without mentioning the term 'sex education' and within topics such as 'family life'.

Human reproduction is dealt with strictly from a biological point of view. Family size and family planning - also considered controversial - are dealt with through :

- a comparative study of family size in different countries (through a geography course in the intermediate and secondary levels) ;
- emphasis on the bad effects of frequent pregnancies on the health of mother and child (biology) ;
- emphasis on the necessity of planning for the future at the individual, family and societal level (home economics courses at the primary, intermediate and secondary levels) ;

- emphasis on the quality of life attained by a small-sized family versus a large-sized one (home economics) ;
- emphasis on the close relationships between population size and development (geography courses at the secondary level).

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In **Somalia**, the project staff discovered that when content is treated as 'normal', with the expectation that it should not be embarrassing (basic healthy bodily functions, for example), it is well received. As another example, fertility and the social implications of fertility are treated in the context of the country's health problems, religious views and cultural practices. This approach moves the potentially controversial theme of fertility to an acceptable level for uninhibited discussion and reflection.

Action 7 : Omit or postpone highly controversial topics

From the broad range of possible topics which might be included in a population education curriculum, it is often possible to identify one or more which are sufficiently controversial in the context of the country that they might jeopardize the entire population education programme. If no way can be found to present such topics in an acceptable form, it may be best to postpone their introduction until sufficient social change has occurred that they become more socially acceptable.

In the **Somalia** project, issues that were considered too difficult to deal with in the school setting (such as female circumcision) were omitted, with the possibility that they will be introduced at a later time when the society considers it appropriate.

Action 8 : Develop a curriculum which is non-prescriptive, encouraging value clarification and individual decision-making rather than supporting or opposing specific positions on controversial issues

Recognizing the importance of equipping teachers with appropriate methodologies to effectively teach controversial and value-laden issues, the Population Education Program of the **Philippines** developed two self-instructional modules for teachers on value clarification and on inquiry approach as ways of teaching population education.

The module on value clarification describes a method designed to engage students and teachers in the active formulation and examination of values. It does not teach a particular set of values but involves the students in practical experiences that will make them aware of their own feelings, ideas and beliefs so that choices and decisions they make are based on their value system. The module further provides the different strategies used when undertaking value clarification and appends a variety of types of sample lessons.

Similarly, the module on inquiry believes in the principle that things are better learned by doing than by telling. This approach involves the participation of the student more than the teacher in thinking, investigating, searching, defining a problem, gathering and interpreting data and forming a conclusion or decision. The module gives the definition of inquiry, the steps in undertaking the method and the role of the teacher in facilitating its use.

Both modules are simply written, presenting easy-to-follow instructions on how to undertake the two methodologies. They also contain exercises, activities, pre- and post-tests and additional resource materials.

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The **Somalia** project used a value-fair approach - a neutral presentation of alternatives - which allowed learners at all levels a chance to become comfortable with the subject matter, which was presented in a non-threatening manner, giving full consideration to the cultural context. Rather than prescribing behaviours, the value-fair approach has permitted, for example, an exploration with learners of the significance of child spacing for the health of families, in the context of the religion and culture of the country, thereby teaching an important concept, in relevant terms, while avoiding disruptive controversy.

In addition, most of the issues which might have been potentially controversial have been so immersed in the general content that they become 'desensitized'. They are raised as valid issues and are dealt with in a value-fair manner without over-emphasizing the issue itself.

Action 9 : Clarify misconceptions about the population education programme through organized meetings with parents and community leaders. Include instructions for doing this in the teachers guides

Using the same value-fair approach, the **Somalia** project staff and trained teachers also conducted programmes for parents which clarified the proposed curriculum changes before they were introduced.

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Meetings with teachers were organized in the **Dominican Republic** to examine project progress and identify the areas that pose the greatest

difficulties in terms of curriculum. Members of parent associations were invited to these meetings to examine teaching material and clear up their doubts and fears. This experience has proved to be very beneficial, resulting in increased support for the project from this sector.

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The various actions described here demonstrate the range of ways of dealing with controversial topics in a population education curriculum. Some of these actions face the controversy head-on, such as a mass campaign to alter the country's perception of the controversial topic. Others avoid it completely, by simply postponing it or treating the controversial topic highly indirectly. Most of the actions described fall between these two extremes. Some approaches treat the controversy directly, but by means less likely to incur opposition (the value-fair approach, the population clubs) ; others try to mollify or defuse opposition (introducing it to adults before children, holding meetings with parents, involving potential opponents in the preparation of the curriculum).

Determining the relevance of draft curriculum materials for a given grade level

Any topic - whether in population or in other fields - should be taught to students at an age when they can understand and appreciate it. Clearly, if a topic is either too complicated or extremely simple, learning will suffer. Equally important, if a topic is consi-

dered by students to be dull and meaningless because it is concerned with issues in which they are totally uninterested or which they feel uncomfortable discussing, they will 'turn off', and not allow the classroom experience to affect their attitudes and values.

It is, therefore, highly desirable to ensure that the population concepts in the curriculum are properly linked to the ages and conceptual development of the students who are to study them.

Traditionally, there are two methods most commonly used to assess relevance. One is to rely on the general impressions of the curriculum developers themselves, who base their decisions on personal experience teaching children of the same age. A second, more scientific method is to combine the first method with results of research studies of concept acquisition among children and youth.

Unfortunately, population education programmes contain numerous elements which are very new both to curriculum developers and to educational psychologists. These two traditional methods of ascertaining relevance are, thus, frequently not applicable. What can they do as an alternative ? One answer to this question is to redirect it to teachers and students.

Action 1 :	*Organize a pilot test of draft curricula. Assess relevance through questioning of teachers and students*

In the **Dominican Republic**, a pilot test was organized in the ix practice schools attached to the training institutions of the country (Escuelas normales).

Decisions concerning the quantity, complexity and quality of contents are usually made by the personnel of the Department of Curriculum. The main criteria they use is their judgment of the maturity, needs and interests of the students.

Educational research or field studies to determine curricular contents are not common practice in Latin America. The cumulative experience of experts, officers of the ministries and teachers is the main criterion to determine what students should learn and when to learn it.

In order to test the relevance of the population education content selected by the project central team, a pilot procedure was organized with teachers and students of primary education of six experimental schools. The try-out included around 40 teachers and 1,000 students from grades 1 to 3.

Observations, interviews and questionnaires were used by the central staff to make the necessary adjustments in the grade level at which to introduce the various concepts.

Insufficient technical skills among staff in the development of certain types of instructional materials

In most countries, the majority of the staff of curriculum development centres, as well as the curriculum writers in a population education programme, have only modest formal training in curriculum development. Most of these individuals are former teachers who have worked their way up through the system, and perhaps have taken one or two short training courses on curriculum. In some countries the writers

of curriculum are mainly current teachers, drawn away from their normal responsibilities for a brief workshop to prepare specified materials.

Usually, the individuals selected for these roles are better-than-average teachers. Their knowledge of the content of their standard subject is adequate. They are also more likely than other teachers to be able to effectively use any new teaching methodologies which are introduced into their school systems.

For much curriculum writing, experience as a good teacher plus some creative talent is sufficient. For a new topic like population, for example, the writer needs first to understand the appropriate content, then envision interesting means of teaching it, then describe these means clearly and concisely.

However, good curriculum development frequently requires more than creatively applying pen to paper. In many instances, technical skills are required that most curriculum writers may lack.

In some instances, the missing skills may still be a variation on writing of teaching/learning materials. For example, preparation of programmed texts, of cases for case studies, and of roles of role playing are 'new' technical skills required for good curriculum.

In other instances, the missing skills go beyond pen and paper. Examples include : development of video and audio tapes, field trial and evaluation of draft materials, analysis of evaluation results to revise the drafts, layout of pictures and text on a printed page, and preparation of inexpensive visual aids.

When population education or other curriculum developers are lacking such technical skills, the two most obvious approaches to overcoming this difficulty are (1) to find others in the ministry who do have the requisite skills and/or (2) to provide the curriculum developers with training to help them learn the skills. Both of these approaches are logical, desirable, and should be considered before alternatives are explored.

However, there are instances where neither of these approaches is applicable : for example, if the ministry has no one with a particular skill, or has one or a few individuals whose time is fully occupied, or if the training is too costly, or if the materials are needed immediately, or the skill is required too infrequently to warrant training someone. In such instances, what have population education programmes done ?

Two basic types of actions have been identified by population education programmes - international and inter-programme cooperation. A different type of action is to adapt rather than to develop, thus reducing the technical skill required.

Action 1 : Cooperate with other countries on the development of innovative materials, learning technical skills from each other

In the early years of population education programmes in the Asian region, the countries had little expertise in the development of some types of learning materials for students. Several countries expressed to the Unesco Regional Office the need for exemplary texts for students. Project personnel from six countries with population education programmes (India, Indonesia, the Republic of Korea, the Philippines, Sri Lanka and Thailand) were brought together to develop cooperatively learning materials for students on different topics.

The major purposes and procedures of the co-operative programme were worked out during a meeting. First, it was decided that learning

units would be developed at the national level to complement the current work in the participating population education projects. The units to be developed would not be repetitious of existing materials, but would serve an important national purpose. Implicit in this approach was the assumption that what is developed and tested in the realistic situation of a country has greater potential for intercountry transfer of experience than what is developed without reference to an actual situation. What is notably amenable and relevant to 'transfer', it was decided, is the methodological experience relating to an issue, media or an instructional approach which is generally agreed to be more difficult to develop.

This co-operative development of learning units was meant, therefore, to provide a vehicle for exploring new or more difficult paths in population education materials development. These included, for example :

- themes which are more than purely informational, such as values and beliefs which bear on population processes ;
- materials that would directly serve the learner, such as self-instructional booklets and picture books ;
- instructional approaches aimed at active learner participation, such as simulation, role-playing and the participation of students in the processes of village development.

In the **Philippines**, for example, under the co-operative materials development programme, eight self-instructional booklets for Grade VI students were prepared by teams of teachers and curriculum writers. These were among the first comprehensive self-learning materials developed for population education in Asia. The units, which come with a teacher's guide containing pre-tests and post-tests, were tried out and subsequently revised. The self-instructional booklets are entitled : (1) Birth, death and population size ; (2) Migration ; (3) Some Filipino beliefs and traditions ; (4) Rapid population growth and food supply ; (5) Man and the environment ; (6) Rapid population growth and health ; (7) Man and natural resources ; and (8) Rapid population growth and education. Most of the units use short reading passages, graphs or

illustrations followed by multiple-choice or short-answer recall questions. Answers are given on the back of each page. The units are richly illustrated. Of particular interest is the broad range of topics and population-related information presented in the set.

Action 2 : Find personnel outside the ministry of education to provide the requisite technical expertise

At the outset of the Somalia project, the staff considered itself to have insufficient skills in materials design and production to be able to meet the immediate needs. Therefore, technical assistance was sought from other sources in the country. A bilaterally-funded project in adult education assisted in some aspects of production, e.g. printing posters, while a locally-based expatriate artist served as a consultant in the design of visual materials, in illustrating texts, and in training project staff and others how to make their own inexpensive visual aids. Not only were the project's own materials strengthened, but co-operation with other internationally and bilaterally funded projects led to coverage of a broader audience than anticipated through the incorporation of important population concepts in the audio-visual materials produced by those projects.

Action 3 : Adapt existing materials rather than develop new ones. Adaptation usually requires a less extensive level of technical skill

There are some instances in which staff of the population education programme may have sufficient technical skills to adapt something

prepared by others, but not have the skills to develop the item completely by themselves. One solution in such instances is to use prototype materials developed elsewhere, then modify them to suit the local context.

In the States of India, for example, programmes faced the problem of lack of technical know-how for preparing audio-visual aids for teaching population education. The Centre of Educational Technology of the National Council of Educational Research and Training (a technical wing of the education ministry) therefore undertook to prepare a prototype slide-and-tape kit at the national level which could be provided to the States for their adaptation.

The kit consists of four units and accompanying teacher's manual for use by secondary school teachers and teacher educators. The first unit deals with the definition, terminology, the rationale and goals of population education. The second also defines the various components of population dynamics and also presents some processes used in estimating population changes. To make the theoretical explanations of population dynamics more concrete, a discussion of the population trends in India and the world is presented. The third unit deals with the consequences of rapid population growth on land, food, housing, education, health, employment, income, transport, pollution and depletion of resources. Some hints for teaching this topic more effectively are also presented. The first three units focus on the population problem and its implications at the national and world levels. Unit four brings out the message that, in the final analysis, all of these facts impinge on family life. Thus, this unit presents the difficulties faced by large families with respect to the different aspects of their quality of life. It is quite prescriptive, stating that unless and until every family gives serious thought to and accepts a small family norm, the population of India can never be brought under control. Developed by population education professionals, the scriptwriting and production were undertaken in two workshops and refined by a film producer and the Media Department of the British Council.

Insufficient financial resources for development and production of all of the types of teaching/learning materials which would be desirable for programme implementation

In most countries population education activities tend to undergo a period of development and improvement before being completely integrated into the larger school picture. Primarily because it is a new content area, population education programmes in most countries have considered it necessary to provide materials for and train a large number of teachers - or even all teachers of the relevant grades and subjects - before attempting the transition to complete integration.

In practice, this has meant that the population education programme provides teaching/learning materials for use in teacher training and in primary and secondary school classrooms. These materials may include :

- readings, case studies and other written materials which teachers use during their own training (up to one set per teacher) ;
- teaching guides, posters and other teaching aids for use by the teacher in preparing for and teaching population education (up to one set per teacher) ;
- readings, worksheets, examinations and other materials for students to use in studying about population (up to one set per student).

Although this may or not be appropriate, many population education programmes would prefer these materials to be of good quality, durable, attractive, and liberally laced with colour pictures.

In addition, since population education is a new subject for most teachers and students, the materials provided for them may need to be more complete and in greater detail - and therefore lengthier -

than those needed for other subjects. Unlike most other school subjects - even those which are relatively new - the teachers have not already learned much of the basic content (either from their previous academic experiences or from other commonly-available sources). Teachers guides, especially, need to be lengthier than comparable materials for other school topics.

The process of development of these types of materials should be fairly substantial, involving trials and revisions in addition to the initial preparation.

The basic thrust of the preceding paragraphs is that the curriculum and materials needed for population education ought to be lengthy and of good quality, and that they require a more-than-normal development process. As a result, they would also be more costly than other materials.

Frequently in developing countries, there are insufficient financial resources to provide even the basic teaching/learning materials for the standard subject. Within such a context, it is difficult to justify lavish expenditure on population education materials. And, usually, even with donor assistance, the financial resources are simply not adequate to prepare all the materials which may be desired.

How have population education programmes addressed this dilemma ? Four types of responses have been identified :

- establish priorities among the possible types of materials ; only develop those of highest priority ;
- use existing materials as efficiently as possible ;
- develop teaching aids which use less expensive raw materials ; and
- obtain supplementary resources from other sources.

For each of these actions, programmes have developed a number of interesting approaches. Although neither this problem nor the examples of national actions are really unique to population education, they are included nevertheless to help stimulate leaders of population education programmes to resolve pressing resource-limitation difficulties.

Action 1 : Reduce the quantity and types of teaching/learning materials to be developed by establishing priorities among the plausible types, then only preparing those of highest priority

In the **Somalia** project, teachers' guides have been supplied to each teacher trained through the project, along with sets of eighteen posters, to each school. These posters were considerably less costly than materials for students. To stimulate dialogue, each poster is used as a springboard for classroom discussion of a single population issue, such as dependency ratio, growth rate, or reasons why Somalis needed large families in the past. The teacher, with his training and his teaching tool, can lead a productive discussion without it being essential for each student to have materials in hand. In this instance, this approach proved to be an effective stop-gap measure until funds for more materials (and the time required to develop and test them) became available.

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Somewhat similar use of posters can be found in the population education project in **The People's Republic of China.** Posters were seen as relatively inexpensive audio-visual aids which facilitated the

work of the teacher as he put his newly acquired teaching skills to work in leading classroom discussions. A set of 15 posters was prepared and distributed to teacher training colleges and secondary schools.

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In the **Dominican Republic**'s project, abridged versions of teaching materials were prepared under a special funding arrangement with UNICEF. This permitted distribution of the basic concepts to all teachers with only a loss of some of the details.

Action 2 : Make efficient use of existing materials by planning their re-use by different groups of people

One problem that beset the training of teachers in population education in **Bangladesh** was the lack of training materials and reference books to backstop their training activities.

This problem could not easily be solved by mass producing materials or setting up a library in each district because of inadequate financial resources. Recognizing this constraint and the need to alleviate this problem, a Mobile Library was established by the national project in 1980 (with the help of the Unesco Population Education Clearing House) for use by the teacher training programme. The Mobile Library contained about 80 English and Bengali books and documents. It was first used on a pilot basis in Khulna District and later extended to other districts. It was loaned out to a teacher training college for one or two months, depending upon the need of the institution. A documentation specialist from the National Population Education Pro-

gramme was made responsible for ensuring the use and transportation of the Mobile Library from one teacher training college to another. Project vehicles were used for transportation.

The following report received from one of the districts indicates that it was a quite successful innovation :

"1. The Mobile Library was placed in the Satkhira Primary Training Institute in the district of Khulna for a period of one month from 5.1.82 to 5.2.82.

2. The scheduling in this regard was done by letter correspondence.

3. The Mobile Library box was transported partly by our official vehicle and no problem was faced in this matter.

4. Unscheduled requests came from some Secondary Schools, Colleges and clubs.

5. It will be useful if the library programme is extended to other institutions but considering the number of the library and shortage of time the training institutes and colleges should be given priority.

6. Announcement, publicity, etc., were done through official letters of the undersigned, local radio centre and a formal inaugural function organized by the undersigned which was attended by all the teachers and trainees of the Institute.

7. A considerable number of educational institutions are requesting for the library. Readers borrowed books for reference purpose, better study and preparation of notes, etc.

8. There was no problem regarding the transport and supervision.

9. As mentioned in the previous feed back report of 31.12.81 some suggested that this library programme should be extended in all the secondary schools and colleges of the country and the library should be provided with more publications on our socio-economic and population dynamics.

10. The summary of the report of the librarian which was prepared on 5.2.82 is given below for information :

The library was kept in the P.T.I. for a period of one month and one hundred sixty eight persons borrowed and used the publications. The topics that the reference questions

"covered were (ranking from the most to the least) 'long time consequence of population control' and 'demographic statistics'. The publications borrowed by the users (ranking from the most to the least) Population Education Development in the Arab Countries and Population and Society. The teachers and trainees borrowed books for different reasons : for use as teaching aids in the classroom, developing lesson plans, completing homework or assignment and developing training programmes. One hundred sixty three users/borrowers got what they were seeking for and fifteen did not. The assistance rendered by the librarian to the users/borrowers was satisfactory. They suggested that books on the following topics/ subjects should be included in the Mobile Library : modern theory of population control in Bangladesh, general knowledge of food value, sanitation education in Bangladesh, treatment and nursing, child guidance, mental hygiene and Sociology. They preferred inclusion of the following types of materials : curriculum materials and syllabi, teaching aids and basic books and reference materials (theories, principles, etc.). As regards the packaging, portability, attractiveness and ease of use, the librarian mentioned that they were very easy to use. He also mentioned that the cataloguing and classification system was easy to follow. He suggested that the Mobile Library should stay in the institute for three months from August to November and that there should be more Bengali books and publications on Bengali literature, psychology, sociology, mental hygiene and child guidance."

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Following the example of Bangladesh, **Sri Lanka** also set up a similar Mobile Library. This library not only provided information and material required for district-level teacher training activities, but also provided a readily available source or pool of materials from which all those engaged in population education in the districts drew. This promoted and facilitated the outreach of population education materials to the rural areas.

The Mobile Library was used by in-service trainers and master teachers, teachers in social studies, science, mathematics and health education, students and other personnel in the district working on population education.

The Mobile Library contained 127 titles which included books, periodicals, reports and actual instructional and training materials in English, Sinhalese and Tamil. The materials were classified under six major categories : (1) population demography and knowledge base ; (2) theories, principles, approaches content and methodologies in population education ; (3) curriculum and instructional materials ; (4) teacher and personnel training ; (5) research and evaluation ; and (6) out-of-school materials.

The Population Education Unit of the Ministry of Education in Colombo was responsible for scheduling the use and transfer of the Mobile Library among the 24 districts. It was based wherever a teacher training session was going on. It stayed in that place for a week, which was normally the duration of the training programme. The transfer of the Mobile Library from one teacher training site to another was facilitated by the Ministry of Education vans which frequently and regularly ply the route in the disticts.

During the training session, the care and operation of the Mobile Library was in the hands of the in-service trainers in each district. However, if the teacher training site had a library, it was manned by the librarian.

Announcement of the existence of the Mobile Library was done by in-service trainers to ensure maximum utilization of materials. During training sessions, the trainers mentioned the titles of the books in the Mobile Library for the trainees to refer to and use. Some hours were left free to enable the trainees to use the Mobile Library.

Action 3 : Develop teaching aids which use less expensive raw materials

In **Somalia**, one response of the project to the high cost of teaching aids has been to use materials such as sticks, stones, piles of

sand, mud models, cardboard models, matchboxes, handmade posters using photographs from magazines or simple drawings, etc. All these items are usually available at little or no cost. The posters are used to illustrate concepts being discussed in the classroom such as comparative life-styles, environmental issues, nutrition, etc. Models are used to illustrate the layout of a community and its public services, along with related problems associated with growth. Stones and sticks are used in games with children to illustrate the difference between arithmetic and geometric progression.

In order to assist teachers to make and use their own low-cost visual aids, the project produced a teachers handbook entitled *Learning To Do*, both as a stimulus and as a guide to the creation of a more attractive and active learning environment.

***

In the **Dominican Republic** project, low-cost teaching aids include classroom games where glasses or cups of water are allocated to students who are divided into population groups of different sizes. Various approaches may be taken, the most popular being one in which the amount of water is held constant while the population grows, the rate of growth differing between the groups. This is used to demonstrate an example of drain on natural resources due to population pressure. Teachers' guides explain the use of these aids in detail.

Action 4 : Obtain resources from co-operation with other projects

In **Paraguay**, a bilaterally-funded experimental activity allowed the population education project's new units to be field tested in the

twelve schools and four regional education centres participating in the experiment. (The regional centres have primary and secondary training functions and are the bases for educational development in various parts of the country.) Funds from other bilateral and international agencies and organizations also allowed the project to produce and distribute materials to a much wider audience than anticipated.

Diffusion of population education content resulting in a dilution, or weakening, of population education learning

In many countries, population education is being included in a relatively large number of grades and subjects. Frequently, the process of preparing population education curriculum begins with the development of a lengthy 'scope and sequence', in which the proposed objectives (and/or content and/or concepts) of the curriculum are listed, by grade and subject. Then, treating each grade/subject independently, individual curriculum writers (or small teams) expand this information to the appropriate materials for one grade and subject. The same process is then repeated for all grades and subjects.

The result of this process is that there is a large quantity of population education, but it is spread very thinly. Throughout his or her school career, a student will be exposed to population concepts frequently, but in small doses.

Even where a unit approach is being used, and written materials for units of several weeks' duration have been prepared and distributed, there frequently is still a considerable reduction of the population content actually taught. This is because teachers are often forced to reduce the time they devote to many content areas, since they do not have enough time for them all. (Virtually never is the **addition** of population education accompanied by the **deletion** of something else.)

The diffusion of population education throughout the student's school career may be either beneficial or detrimental. Those who believe it to be beneficial argue that if a student is frequently exposed to population issues, in different subjects and at various ages in his life, the topic becomes a common one, about which he is relatively knowledgeable and accustomed to discussing ; in such a situation, he should have relatively little difficulty integrating what he has learned in school into decisions to be made later in life. From the other perspective, however, it is argued that this 'shotgun' approach to curriculum development produces a series of learning experiences which the student is unable to integrate into any understandable pattern, and that without such an integration - a framework on which to hang related concepts - the pieces of knowledge he has learned are soon forgotten.

Undoubtedly, some truth exists in each of these arguments. In some of the older population education programmes, however, there appears to be greater concern with the need to ensure that this diffusion of population education throughout the school programme does not produce a dilution of student learning.

There are two plausible solutions to this problem which are likely to be the first, most obvious ways of dealing with it :

- reduce the number of subjects in which population education is included to one or two, while correspondingly increasing the amount of time devoted to it in the remaining subject ; or
- periodically, throughout the student's life, expose him to a more intensive course (or lengthy unit in a course) which helps him to integrate his previous learnings.

Both of these approaches are now being used in some countries. In addition, a different type of approach is to focus more on the content itself to ensure continuity from grade to grade and subject to subject.

Action 1 :	*Select core content/messages. Apply these to curriculum at different levels and in different subjects*

In order to focus the content of population education, the Philippines has prepared the revised curriculum in population education around the following five core contents or messages : (i) family size and family welfare ; (ii) delayed marriage ; (iii) responsible parenthood ; (iv) population change and resource development ; and (v) population-related beliefs and values. Other countries in Asia are also following a similar approach in building population education content around core messages. This idea of 'core messages' was developed in a workshop organized by the Unesco Regional Office in Bangkok in 1984.

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Additional comments

There are numerous other aspects of curriculum and materials development not covered by the issues and actions outlined in this chapter. For example, some population education programmes have identified the following issues as problematic, although they have not as yet devised adequate solutions for them :

- How can a population education programme make best use of curriculum materials received from other countries ?
- Some national population education sourcebooks have not been as useful as others ; how can a programme improve the likelihood of its sourcebook being truly relevant to the needs of its curriculum developers ?
- There are a number of countries in which an overall educational reform coincides with, precedes, or follows the development of a population education programme ; how should the population education activities be linked with such a reform ?

Curriculum development is, of course, a far broader field than population education curriculum development. There is much that a population education programme can learn from its own and other countries' more general experience.

To help clarify some of the most recent trends and general understandings of an appropriate, practical approach to curriculum development, we recommend to programme staff the following sources :

Lewy, A. (ed.), *Handbook of Curriculum Evaluation,* Unesco, International Institute for Educational Planning (IIEP), Paris, 1977.

Unesco, *A Systems Approach to Teaching and Learning Procedures : A Guide for Educators,* 2nd ed., Paris, 1981.

Unesco, *L'éducation relative à l'environnement,* Les grandes orientations de la Conférence de Tbilissi, L'éducation en devenir, Paris, 1980.

Skages, R. and Dave, R.H., *Curriculum Evaluation for Lifelong Education,* Unesco, Institute for Education, Hamburg, Pergamon Press, 1977.

Unesco, *Curriculum and Lifelong Education,* Paris, 1981.

Chapter 5

In-service Training of Teachers

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Opposition or lack of motivation of high-level educators and other education officials

In chapter 3, the nature of initial indifference or opposition to population education among high-level policy-makers was described. Essentially the same reactions occur among the next levels of officials and educators - the remaining leaders of the central ministry, regional and district personnel, school principals and teacher trainers.

These are the people who turn plans into programmes. Without their active commitment to population education, the result may be a programme in name only, lacking the concern required for it to succeed. Before developing its activities - or, at least, before expanding to a larger scale - population education programmes need to ensure the active support of educators and other education officials.

How have population education programmes dealt with this issue ? Three approaches are identified - involving high-level educators in the planning and implementation process, providing them with opportunities to learn about population education, and conducting a national 'day' on a population-related issue.

Action 1 : Assign responsibilities and offer incentives to some key high-level educators to participate in the population education programme

The **Nigerian** Educational Research Council (NERC), which is the body mandated by the government to implement the population education

project, set up a committee to manage the project. This Population Education Committee (PEC) is made up of twenty members drawn from different walks of life including some key Federal Government Ministries, the National Population Commission, the Universities, Research Institutes and the Federal Manpower Board. Over half of these people are drawn from different Nigerian universities and research institutes. The PEC is divided into the following five different sub-committees, each of which looks into one major area of activity of the project :

- Research and Evaluation
- Curriculum
- Teacher Training
- Instructional Materials Production
- Population Awareness

University professors in the ranks of Deans of Faculties are chairmen of the first four sub-committees. Project funds are allocated to each sub-committee to enable it to carry out its specific activities, the progress of which the sub-committee must report to the PEC during its sittings. As most members of the PEC reside and work outside Lagos, the NERC pays their travel and per diem during each session in Lagos. In addition, honoraria are paid to the sub-committee members for the specific tasks they perform for the project outside normal sessions (e.g. for doing research, curriculum development, etc.). These and such other 'hidden rewards' for a job well done (e.g. prestige, participating in an important national activity, opportunity for travel, etc.) have both stimulated and sustained the interest of these high-level educators in the Nigeria population education project.

By involving high-level educators from the beginning of the project, the NERC hopes to facilitate the acceptance and integration of population education into the degree/diploma programmes of some Nigerian universities when the programme becomes generally introduced into the Nigerian education system.

Action 2 : Provide educators with opportunities to learn about population education

In **Sierra Leone**, one of the pre-project activities was the organization of study tours for the Project Director and a few Senior Principals of secondary schools to visit a number of projects in Southeast Asia as well as the Population Education Unit of the Unesco Regional Office for Education in Bangkok.

Upon their return to their secondary schools in Sierra Leone, these Principals served not only as part-time local resource persons during a number of the project's activities, but also as promoters of the introduction of population education into the secondary school and pre-service teachers' college curricula. They made their schools immediately available for use as pilot schools for the project. Upon request by the project staff, they readily nominated some teachers in their schools who later received in-service training as population educators. Upon his transfer from a secondary school to a pre-service teachers' college, one of them took immediate steps to introduce population education into the curriculum of that teachers' college (Milton Magai Teachers' College).

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Before the start of a population education project in **Morocco**, many high-level educators of the Ministry of Education were not completely prepared to accept such a project. To convince educators of the value of population education, a pre-project activity included study tours for the Directors of the Teachers Training, Educational Planning, Primary Education and Secondary Education Departments. These four Directors - on two separate trips - visited population education actiivities in the

Philippines, Thailand, the Republic of Korea, Tunisia and Egypt. These study tours motivated them to accept the implementation of the population education project at a later stage.

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In **India**, despite some ten years of interest and activity on a very limited scale (in several states by university professors, the national Planned Parenthood affiliate and a centrally located government population education office), a number of instances of opposition from high-level education officials in states and territories were noted when a full-scale national project was launched in the late 1970s. This was particularly important in view of the fact that the country's 31 states and territories have autonomous education systems. The educators mistakenly assumed that they were being asked to participate in a family planning programme for children. This occurred despite the fact that the project was being organized by the national and state ministries of education - not by family planning or health personnel. In response to this expressed fear and opposition, the central staff, based in New Delhi, travelled to the various states to conduct training which dealt with these issues. In addition to a number of state visits and consultations, four regional seminars were conducted to which all states and territories were invited. Among other things, this training reassured the reluctant educators that population education was not family planning for children. It was, instead, an important development effort aimed at teaching children and adults about the implications of population change for the quality of their lives. Through this training, the educators came to see themselves as having a major role to play in an important development effort. The response was overwhelming popular support, as evidenced by the fact that the national project grew much faster and to a larger size than expected : instead of the anticipated 18 states, 28 states and territories asked to participate in the project.

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The project in **Madagascar** is supported by the activities of an **informal discussion group**, consisting of a series of national specialists, representatives from international agencies, and the press. The involvement of the latter is especially important, as the person concerned covered the International Conference on Population in Mexico in 1984, and wrote numerous articles before, during and after the Conference. The newspaper *Madagascar Matin* has become progresssively 'specialized' in population questions, and even received a prize for best coverage of the Mexico Conference.

One result of the meetings of this group is that concerned educators now feel much more at ease in dealing with population questions.

Action 3 : Conduct a national 'day' on a population-related topic

In **Paraguay**, despite years of limited interest and small-scale implementation of sex education activities in the country, there were expressions of concern and opposition from educators when these activities were to expand in the late 1970s. In an attempt to deal with these concerns, the Ministry of Education and Religious Affairs organized a national 'Sex Education Day'. The participants were professors and education specialists attached to various departments in the Ministry, plus the 'multiplier personnel' who were to participate in the spread of the educational innovation at primary, intermediate and teacher training levels. The occasion provided the opportunity for these educators to share their concerns and experiences with the Ministry staff who were planning the programme expansion. They, in turn, were able to incorporate these concerns and experience into their planning, making revisions where appropriate.

The revisions made the proposed content more relevant to the country's perceived reality, relating it to the religious beliefs and values surrounding the family, sexual behaviour, use of contraception, engagement practices, etc. Revisions also included changes in terminology which, in a number of instances, was appropriate and acceptable in Spanish but considered vulgar, and therefore unacceptable in the language used by the majority of the country's rural population.

The breadth of issues raised by the educators, and the intensity of feelings expressed, underlined the need for the project to establish an in-depth dialogue with the Church, parents and all of the institutions involved in population and development activities, in order to secure support.

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Several different types of actions which national population education programmes have used to overcome opposition or indifference of high-level educators are described in this section. These range from helping them to learn more about population education through a domestic training activity or an international study tour to assigning them roles in the national programme to a national-scale one-day discussion.

The common factor in all of these actions is the attempt to **involve** educators in some way in population education. An underlying assumption in these approaches is that educators will support population education once they understand it better, that it is neither necessary nor desirable to employ any 'subterfuge', any 'advertising' which convinces while hiding the real nature of the product.

Opposition or lack of motivation of teachers

For the same reasons as noted in the previous issue and in chapter 3, initial opposition or lack of motivation to population education exists among teachers.

Clearly, any teacher will do a better job teaching a topic he or she favour than one he or she opposes. How have poulation education programmes acted to ensure teacher support ?

The most obvious answer to this question is through in- and pre-service teacher training : in addition to teaching contact and methodological skills, such courses should also try to encourage teachers to value their teaching of this topic.

Other actions taken by population education projects include a number of interesting interventions. These include such things as debate and quiz competitions which - while focused on students rather than teachers - serve as excellent means to motivate teachers as well.

Action 1 : Inform teachers of the national level decision process which led to the establishment of population education

The **Paraguay** project found that it was useful to inform **classroom teachers**, at the initiation of each training programme, of the rationale used in central level decision-making which led to the establishment of the project. Once the teachers understood the basis for the project and the importance of their role in implementing it, they gave the

project their full support. This was evidenced by their enthusiastic attitude during training, the positive comments they made to trainers and their continuing participation in project activities following the training.

Action 2 : Provide special recognition to the best population education teachers

Two secondary school headmistresses and the co-ordinator of the population education project in Tamil Nadu (**India**) were awarded prizes in 1984 by the Commonwealth Association of Science, Technology and Mathematics Education (CASTME) in recognition of their commendable work in population education. This has encouraged other schools in Tamil Nadu and other states in India to use innovative approaches to population education.

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In the **Somalia** project, one way of sustaining teacher motivation has been to award 'master teacher certificates' to key teachers trained by the project staff. The initial training was of short duration (12 days) but intensive. It was followed by supervised field work, the quality of which had to be approved by the project staff. It is not easy to earn a master teacher certificate, and these certificates are highly prized. These **master** teachers subsequently train **classroom** teachers ; a special population education teaching certificate is awarded to classroom teachers who complete the programme to the satisfaction of the master teacher. The system allows **classroom** teachers to advance to the level of **master** teacher and receive this advanced 'master teacher certificate'.

Action 3 : Conduct a national quiz competition on population education

In the **Philippines,** a nationally-televised quiz competition on population education is held every year for students all over the country. The competitions are first held at the district and provincial levels and then at the national level. This has promoted motivation and competition among schools to win the provincial and national awards in the quiz competition.

Action 4 : Conduct a debate competition on population education

In **India,** a State-level debate competition on Population Education was organized by the Population Education Cell in Bihar State in early 1985. It was the second endeavour in the line of innovative activities of the Population Education Project in this state, the first being a state-level drawing and painting competition in population education.

The aim of such activities is to create interest and awareness among students and teachers about population problems and their impact on various aspects of human life.

The Class X debate competition was organized in the 38 districts on 31 January 1985. The competitors securing first and second positions at the district level participated in the division-level competition two weeks later. Again, those in first and second positions at the division level advanced to participate at the State level the following month.

The summary of the deliberations of the competition were broadcast on radio.

Action 5 : Emphasize to trainees that population education is not really 'new'

In the **Somalia** project, potential sources of anxiety among teachers, such as new, unfamiliar content, were dealt with in training by stressing that population education was simply a new way of looking at already-established content. Methods were tried by teachers, and their reactions were discussed before returning to their own classrooms to apply their new learning. Many teachers had heard of the new techniques being introduced, but had never been taught how to apply them to materials. 'Newness' and 'difficulties' were de-emphasized in the training. Teachers were therefore confident and motivated.

Treatment of controversial or sensitive issues in teacher training

In chapter 4, the treatment of controversial issues in the curriculum was discussed. The difficulty in identifying a list of population education's controversial or sensitive topics, due to the extensive variations from country to country, was noted. Variations within a country in support of or opposition to the inclusion of certain topics in the curriculum was also an important characteristic. Finally, the frequent misconceptions people hold concerning the goals and means of population education, which result in many topics being unnecessarily perceived as controversial, was also described as a common characteristic of this field.

The background to this issue, as applied to teacher training rather than curriculum, is essentially similar. School teachers tend to have roughly the same values as their larger society, and probably initially have roughly the same misconceptions about population education. From this perspective, they are part of the larger public for whom general motivation concerning the value of population education is desirable.

But school teachers also are the people who are expected to teach controversial and sensitive topics in their classes. Therefore, they not only need to feel **personally comfortable** with these topics, but also need to feel **comfortable teaching** them.

The actions described under 'treatment of controversial issues in the curriculum' (chapter 4) also have implications for teachers and, thus, for teacher training programmes. In addition, population education programmes have devised other means, more directly focused on teacher training, to help teachers learn how to treat controversial or sensitive issues in their classes.

Action 1 : Encourage teacher trainees to discuss difficult topics with the training staff privately

In **Paraguay**, where a number of issues of human sexuality were introduced in the curriculum, the most potentially controversial of these issues were discussed during the training of teachers by the central staff. During this training, there are breaks in which persons with special 'problem' questions can raise them privately with the training staff. The trainers then reformulate these questions as part of the training session following the break. This avoids embarrassment to the trainee who raised the question and it permits the whole group to learn about the issue. In addition, teachers are advised to consult

experts (physicians, priests, psychologists, sociologists) for additional information. Educators are supplied with some information which cannot be found in the curriculum, such as statistical data on abortion as a cause of maternal mortality, unwed mothers and illicit unions.

This modality has resulted in many discussions and the analyzing of many problems which otherwise could not have been raised.

Action 2 : Have well-known, respected teachers and scholars lead the discussion of these topics

The opinion or instruction of a trainer at the same academic level as a trainee frequently does not carry as much weight as that of a trainer with a higher or different educational background. For example, regarding human reproduction, especially where myths or rumours are prevalent, the opinion of a physician will be accepted more readily than that of an educator from the Ministry of Education.

In its first phase, the **Dominican Republic**'s project trained the teachers through principals and supervisers. The training of these trainers was done by project staff with the co-operation of specialists from Pro Familia (Dominican Association for Family Protection) and INES (National Institute for Sex Education) to discuss controversial issues. Besides the experience of these persons in dealing with controversial topics, they showed good quality audio-visuals and also distributed reading material.

Pro Familia and INES are well-known private organizations with experienced education departments. When required, they have always voluntarily collaborated with the Ministry of Education because they recognize the enormous potential of the formal education sector in facing problems which are of mutual interest.

Whenever possible, the training of teachers followed the same scheme as the training of trainers, using Pro Familia and INES personnel. Since these organizations mainly serve the capital city and the main urban centre, in the rest of the country specialists from other ministries (Health, Agriculture) were invited.

The level of the discussions and interest during the training and the participation of these personnel in subsequent stages of the project are a good indication of the usefulness of the strategy.

Action 3 : Train teachers to deal with difficult issues, even if they are excluded from the formal curriculum

In **Bangladesh**, the project staff opted to avoid introducing issues in the curriculum which were thought to be potentially controversial, such as human reproduction. However, in order for teachers to be prepared to deal with likely questions from curious students, teachers were trained in how to deal directly with them. This has satisfied natural curiosity and allowed the teacher to maintain his image as a knowledgeable person, without creating unnecessary controversy.

This is an interesting approach, which allows a controversial or sensitive topic to be introduced and discussed, even if it is still thought to be potentially too difficult to include within the formal curriculum.

Limited experience in training teachers for the simultaneous introduction of both new content and new teaching methodologies

Most educational innovations focus either on new content or on new methodologies, but not on both. This sometimes leads to programmes which completely incorporate some new content while retaining traditional, usually lecture methods of teaching. Or, alternatively, the innovation may train teachers to use active, participatory methods, while employing irrelevant, unimportant content.

If a population education programme falls into a trap of focusing either on content or on methodologies alone, it is less likely to be successful. Clearly, the content of population education is new. But of equal importance, the methodologies used by teachers must be the types of methodologies which will result in greater **in-depth involvement** by the students in their own learning (in order to have a meaningful affective impact) and greater **retention of learning** by the students (in order for the long time span of some of population education's objectives to be achieved). In essence, this implies that participatory, active, multi-sense-oriented teaching/learning methodologies are as necessary for population education as is its content.

Where these types of teaching methodologies are not commonly used, the in-service training of teachers needs to focus on **both** content and methodologies. This simultaneous focus on both factors is not customary.

Several population education programmes have addressed this issue by training teachers with the same content, materials and methodologies which are later expected to be used with students.

Action 1 : During their training, have teachers experience the new methodologies while teaching the new content. Use the same materials which they will later be expected to use in their classes

In **Honduras**, a project in formal education has selected for each school grade the three or four most relevant topics and has planned interdisciplinary teaching/learning units for each. The main focus is an activity to be carried out by the student (e.g. to play guessing games on sex roles, to illustrate a story about family changes, to sing songs about parental care). Each unit includes elements on sexuality, family life, population and human ecology. The curriculum has units for each of the six primary grades. Both the content and the methodology used to teach this content were new to the teachers. They were trained to use these materials by experimenting with the activities themselves just as their students would participate later.

An experimental project, developed during two months in one of the poorest regions of the country, involved classroom teachers directly in finalizing the teaching units. The experiment demonstrated that this type of approach (learning by doing or playing), besides being very interesting to teachers, posed no special problems of adoption or adaptation. In addition, the fact that teachers were encouraged to contribute ideas - not just **react** to the draft materials - resulted in teachers very often proposing better activities than the ones suggested by the learning unit.

Selecting appropriate teachers for participation in the initial trial of the curriculum and for the teaching of certain controversial issues

Most population education programmes intend, eventually, to train a large number of teachers, throughout the country, to teach this new content area. Special selection of teachers is not necessary, since the target is usually **all** teachers of the specified grades and subjects.

Nevertheless, in the early stages of population education programme development, there sometimes is a need to select a small number of teachers. Two examples of such situations are the special selection of teachers for :

- the trial of draft curricula (such teachers must be able to articulate comments on the draft materials and to recommend improvements) and
- the initial teaching of sensitive or controversial topics (such teachers must be sensitive to the community's concerns, able to teach these topics well and able to articulate support for continuation of this teaching in the face of possible opposition).

For these situations, especially sensitive, intelligent and articulate teachers are needed. A random selection process will not find these special teachers ; a more purposeful process is required. Population education programmes have used different approaches to finding them.

Action 1 : Use a psychological test to screen applicants

In the early years of the **El Salvador** project, the staff wanted to place great emphasis on issues of human sexuality and family life.

In order to deal with these potentially controversial issues most effectively, it was felt that the teachers needed to be screened very carefully. One of the project's international advisers devised a screening test, based upon psychological variables, which was given to all of the teachers who expressed an interest in teaching issues of human sexuality. This resulted in the eventual selection of a small group of eighteen teachers who were considered by advisers and staff to be the most capable of dealing with sensitive issues in the classroom.

Action 2 : Select among applicants by comparing their achievements on a population-related assignment

In **Egypt**, in the very early stages of the project, before external funds made it possible to provide face-to-face training for large numbers of teachers, the project staff was confronted with the need to select and prepare a small group of teachers for a short-term, face-to-face course. This course was funded bilaterally, annually, and could be open only to a small group. Selection was carried out through a three-phased process. First a large number of teachers from different parts of the country were contacted to determine their interest in learning about population issues. Those who replied positively were enrolled in a correspondence course in which they studied materials written and distributed by the central project staff. Those who passed this phase of the course were issued instructions on how to conduct a demographic survey of their community. During this phase, the teachers carried out local surveys, documented their findings on births, deaths, marriages and migration, then submitted their completed work to the central staff. For those who made the highest marks, the reward was the opportunity to participate in the face-to-face training course in Alexandria. During this final phase, they were given

more hands-on training in materials development and teaching methodology as well as an opportunity to discuss their experience and related questions.

> Where central project staff and trainers cannot train all teachers through face-to-face training, how can teacher training be accomplished ?

Most population education programmes have decided to include population in the curriculum at several different levels and in more than one subject. One implication of this situation is that a large number of teachers are expected to teach it. Since population issues were not included in the earlier pre-service training which most of these teachers completed, they have had little or no exposure to this new content area. Therefore, all population education programmes have decided that some form of in-service training of teachers is required before these teachers can reasonably be expected to teach it.

Traditionally, the most common form of in-service teacher training is 'face-to-face' training, with one or more individuals conducting classes for groups of teachers. Frequently, large-scale training of teachers is achieved through a 'multiplier' approach, with national trainers training regional trainers, who in turn train teachers ; alternatively, there may be additional layers of training between the regional trainers and the teachers.

Commonly, such training courses for population education last one or two weeks. Many programmes have employed this approach to some extent.

Nevertheless, there are numerous constraints with this approach. Unless conducted during a vacation period, teachers are removed from their normal classes for their training, requiring either substitute teachers or closure of their classes. Management of large-scale training - with the need for appropriate facilities, accommodation, dealing with personal problems, travel allowances, etc. - is complicated. If there are too many layers of trainers separating the programme staff (or other 'first-level' trainers) from the teachers, the training course may lose clarity and cohesiveness. If the trainers have other responsibilities, they may view these courses as an unappreciated extra burden.

Probably the major constraint, however, is financial. Face-to-face training programmes are costly, usually requiring considerable funds for per diem and travel of participants and trainers. If the programme's intention is to train a large number of teachers, there may not be sufficient funds available - whether from national or international sources - to train all of them through this approach.

Some programmes recognized this from the start ; others have learned it from experience. Many population education programmes have devised innovative means to overcome this constraint. These fall into four general categories : distance learning approaches, local teachers as teacher trainers, a 'massive' strategy and linking with other in-service training.

Action 1 :	*Develop distance learning approaches to replace or supplement face-to-face training*

In the **Philippines**, it was originally planned to train over 200,000 teachers through face-to-face training, but it was later realized that it was not possible to do this for various administrative, financial and geographical reasons. **Self-instructional modules** were, therefore,

used to supplement face-to-face training. The Population Education Program of the Philippines prepared a set of twelve self-instructional modules using four different management schemes, namely : (i) independent self-study ; (ii) monitored by a population education-trained principal ; (iii) monitored by a population education-trained school district supervisor (elementary level) ; and (iv) monitored by a population education-trained high-school principal and/or department head (secondary level). An accompanying Module Manager's Guide was also developed. The feedback on the use of self-instructional modules has shown that this training strategy is as effective as the face-to-face training model, is more economical and poses fewer management problems.

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The population education programme in **Malaysia** has also used this strategy, and has developed a set of eight self-learning modules called 'SLEM'. These modules are : (i) Introductory Module ; (ii) Population Change - Its Determinants and Consequences ; (iii) Population Situation in the World and Malaysia ; (iv) Population Programmes in Malaysia ; (v) Population and Environment ; (vi) Population and Resources ; (vii) Population and Quality of Life ; and (viii) A Management Module for the Use of Headmasters. The teachers are not left on their own to study the modules but, after reading, they discuss them under the direction and leadership of the headmaster of the school who acts as the course manager and trainer. The headmasters have already been given intensive face-to-face training by the project staff, both in population education and in the use of SLEM.

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It has been shown by some studies that self-learning modules can bring about as great a gain in knowledge and attitudes as tradi-

tional instructional models. Modules provide for independent and direct training of teachers, require minimum supervision, are easy to administer, more economical, and entail a minimum of logistical problems.

***

In **Egypt**, a **correspondence course**, which starts in December and ends in August each year, is prepared by the population education team assisted by specialists in the different subject areas. Participation in the course is voluntary. The course is general, not tailored to the functional needs of teachers in specific subject or grade levels. Its objectives are for teachers to learn :

- how to prepare specific objectives ;
- how to design a prototype lesson in population education ;
- how to use new teaching methods ;
- how to prepare simple teaching kits ; and
- how to use different evaluation tests which measure knowledge, attitudes and skills.

It includes two parts, theoretical and practical. The theoretical part includes lectures mailed to the participants covering the following themes :

- the population problem in the world and in Egypt ;
- the population boom and its effects on education and agriculture;
- the Egyptian population policy ;
- the distribution dimension of the population problem ;
- the cultural dimension of the population problem ;
- the objectives and concepts of population education.

For the practical part of the training course, participants prepare two papers based on field research in their immediate environment. They also design lessons in which they integrate population concepts.

Memos are sent to participants giving them instructions regarding the field research. The participants are given assignments in March

and May. One of these assignments is to collect and analyse folk proverbs and local customs about marriage, sex preference, etc.

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In **Pakistan,** Allama Iqbal Open University (AIOU) has organized a training programme in population education for elementary school teachers through distance teaching. This University was established in 1974 by an Act of Parliament with an unusual set of objectives, including providing education to people who cannot leave their homes and jobs and imparting basic education to the masses at large. The AIOU has developed rapidly into a successful non-formal counterpart to the already-existing system of formal instruction.

The AIOU employs a number of techniques and methods to provide input to the learner. The instructional system comprises the following components :

1. Correspondence materials are mailed to students according to a schedule.
2. Tutorial sessions provide students periodic opportunities to meet a tutor working part-time for the university. The tutor assists his students in understanding difficult parts of the correspondence text.
3. Student assignments constitute the essential homework to be submitted at regular intervals to the tutor for assessment.
4. Radio and TV programmes support and supplement the correspondence materials.
5. Assessment is made on the basis of both home assignments and end-of-the-course examination taken by the student at various university study centres located throughout the country. It is essential to pass in both these components separately.

AIOU has developed different curricular materials, trained master trainers, trained teachers and provided orientation to 70,000 primary

school teachers in population education. During the Sixth Plan period, AIOU is committed to train about 10,000 teachers (1985) through its five-month correspondence course supplemented by radio and television programmes. By choice, credit units towards Bachelor in Education and Certificate could be earned by teachers.

AIOU also has other population education programmes such as :

- Pop-Lit - integrated population education contents in literacy programmes ;
- Small Family Community Guide - the primary aim is to prepare 13,327 Branch Postmasters for their effective role as parents and as social change agents concerning population-related activities in their communities ;
- population education concepts are also integrated in relevant courses in the Faculties of Basic and Applied Science, Education, Agriculture and Home Economics and Social Sciences.

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Many countries in Asia and the Pacific are using **radio** and **television** in supplementing and reinforcing the in-service training of teachers. For example, in **India** the Satellite Instructional Television Experiment (SITE) was conducted between 1 August 1975 and 31 July 1976 by using the Geostationary Satellite ATS-6. Under this programme, 2,400 villages spread over different parts of India regularly received four hours of instructional TV programmes every day. The programmes covered school education, agriculture, health and family planning with emphasis on rural development. The Centre for Educational Technology organized training for 46,000 primary school teachers in teaching science under SITE with the help of a multi-media package. This was an exercise in the management of a training programme for several thousand teachers scattered over thousands of square kilometers as well as an experiment with the utilization of radio and television. The evaluation studies of the experiment point out that it was a successful programme.

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The use of educational radio and TV for the in-service training of teachers in population education is now being used in some countries in Asia. The **Republic of Korea** has used educational radio and educational television to supplement the training of teachers in population education. **Nepal** is using radio for the training of primary teachers in population education under their national population education programme. This is an economical model for training teachers, especially those who live in remote areas. The head of the school is made responsible for conducting the training programme and sending feedback and evaluation periodically to the district education officers of the concerned officials at the national level.

Action 2 : Train some teachers through a face-to-face strategy ; include suggestions and materials to help them train other teachers. Encourage or require them to train other teachers (at no cost or only local cost)

In the **Somalia** project, external funds were spent to train a group of master teachers who then trained other teachers, in small groups, over a long period of time without additional cost. The initial training of master teachers was done over a period of twelve days. Close contact with central staff was maintained afterwards and, upon completion of actual field work, the master teachers were awarded special master teacher certificates. They, in turn, provided over 40 days of training to other teachers. These were not consecutive days, nor was every training day a full work day. The emphasis was on quality of learning rather than the number of days completed. This training took place during time off from regular teaching duty, regular breaks in the school calendar and weekends. When teachers completed their training to the satisfaction of the master teachers, they received a special certificate.

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India, Indonesia and **Sri Lanka** use mobile teams, comprised of trained and experienced teachers, administrators and supervisors, to conduct training programmes for teachers in their schools or in designated training centres in the area. The training is frequently organized during vacations or weekends as may be convenient to the teachers and administratively feasible in a particular area. These teams are equipped with a variety of instructional materials, aids and equipment. The teams can be replenished as the training goes on, thus minimizing the withdrawal of the members from their respective posts for a longer period and also giving a chance to other competent teachers and administrators to act as trainers.

The advantages of this model are that it does not disrupt the school work and is more economical because there is no additional expense to be incurred for the training or daily allowances of the teachers. Moreover, the training programme can be geared to issued and problems specific to a particular school or area, thus making it more relevant and useful to the teachers.

Action 3 : Devise a 'massive' strategy to train a large number of teachers in a very brief period

In Maharashtra State in **India**, a strategy for the training of teachers on a mass scale using lecture cards was used. With the help of about 700 resource persons a ten-day 'massive' training programme was organized in 216 centres in all the districts of the State during January 1983. Each of the 14,357 Upper Primary School headmasters, teachers and primary school inspectors were exposed to a two-day population education course.

A similar massive training programme for the secondary level was organized in 170 centres in 28 districts of the State. Each training course was of three days' duration. The training programme was completed in six days, covering 12,900 headmasters and teachers of secondary schools ... In another similar programme, 2,700 teachers from Bombay and Thana districts were covered.

With a view to avoiding dilution of messages during training, an innovative approach was adopted by the State in the form of lecture cards. A set of 22 lecture cards was provided to the trainers. The first card in each series gives the main points to be covered in that particular lecture. The following cards cover the data required for the elaboration of each point. One side of each card gives the data and the facts to be taught while the other provides the trainer with the hints on how to teach these facts. Since population education is a new dimension at both the elementary and secondary school levels, it could be expected that teacher educators will deviate from the basic concepts and understanding of population education. The lecture cards helped them keep their lectures within the boundaries and conceptual framework of population education. The feedback received from the project shows that this strategy was quite effective in achieving the objectives of training in terms of changes in the knowledge and attitudes of teachers.

Following the successful use of this strategy for the training of teachers, other States in India, such as Punjab, also utilized it for the training of teachers.

Action 4 : Integrate population education training into general in-service training

In **Indonesia**, training of teachers has been linked with the massive in-service programme of upgrading all the teachers in the new curriculum being introduced in schools. The benefit of this strategy is mainly economical because no additional expenses are required for the travel and daily allowances of teachers. The basic limitation of this strategy is that the time made available for population education is not really adequate.

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Finding an effective yet inexpensive means for preparing teachers to teach population education is, simultaneously, one of the most important constraints which programmes face and on in which they have taken some of the most innovative actions. There surely is no single answer to this need, and it is expected that experimentation will continue in a number of countries, with population education programmes evolving more and more effective mixes of training strategies.

Additional comments

Teacher training - both in- and pre-service - is a field which has attracted considerable research and other assessment interest in many countries. There is much that is known which can be of value to people planning and implementing population education teacher training activities. Unesco Headquarters has prepared a publication, *Preparing Teachers for Population Education : A Handbook* (Unesco, Paris, 1983), which suggests a variety of ways of linking population education with improved, innovative approaches to teacher training.

Several of the characteristics of population education imply that traditional approaches to preparing teachers are not likely to be very useful. For example, a teacher should perceive population as a **holistic, interdisciplinary** content area, not as a series of fragmented units ; the approach he or she uses in teaching should be **problem-oriented,** using methodologies which frequently require **interaction with** the students' **family and community**, since it is at this level that a population situation and its problems are first manifest. None of these characteristics are common to traditional approaches to teacher training.

A fairly complete survey of the desirable modifications of teacher training to accommodate the training needs of population education is presented in Annex 3. This annex, from *Preparing Teachers for Population Education* (pp.24-26), is derived from another very useful publication by Unesco, *Workshop Guide for Teacher Educators* (Doc.ED/HEP/TEP/81/225). A workshop approach to teacher training, with emphasis on **praxis** - an evolving interaction between theoretical and practical considerations and actions - is emphasized in these materials.

Other sources on teachers and teacher training which population education programme leaders will find of assistance include :

Goble, N.M. and Porter, J.F., *The Changing Role of the Teacher,* International Perspectives, Unesco, International Bureau of Education (IBE), Studies and Surveys in Comparative Education, Paris, 1977.

Cropley, A.J. and Dave, R.H., *Lifelong Education and the Training of Teachers,* Unesco Institute for Education, Hamburg, 1978.

Greenland, J., *The role of the headteacher in in-service training,* Unesco, Paris, 1983.

Hendry, J.A., *Guidelines for the design and management of teacher education programmes,* Unesco, Paris, 1978.

Chapter 6

Pre-service Teacher Training

Page

Where pre-service teacher training institutions are administratively distant from the population education unit (i.e. within a different ministry or in a different division of the same ministry), how to ensure that population education activities begin in these institutions relatively early ? 149

Action 1 : Have the population education programme staff conduct seminars and provide technical assistance to teacher training institution personnel 150

Action 2 : Involve officials responsible for teacher training and headmasters of pre-service training institutions in the development of the project document 151

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Where pre-service teacher training institutions are administratively distant from the population education unit (i.e. within a different ministry or in a different division of the same ministry), how to ensure that population activities begin in these institutions relatively early

In most ministries of education, the locus of population education activities is usually either in a curriculum unit, a planning unit, or a special semi-autonomous project. Pre-service teacher training, on the other hand, is in a totally different sector of most education ministries, and sometimes even in a completely different ministry. Formal linkages between the two must pass through numerous bureaucratic steps, frequently making effective coordination very difficult.

In general, most population education projects tend, in the beginning, to pay relatively little heed to pre-service training, focusing instead on the development of curricula and the training of existing rather than future teachers. Their interest in pre-service training begins to develop only a few years later when they realize that new teachers are entering school with no background in population education.

However, the lead-time required to train personnel and develop curriculum for the pre-service training level is not brief. As a result, in many countries, training of future teachers in population education does not reach the pre-service teacher training institutions until four or five years or more after the start of the population education programme. In the interim, a large number of new teachers begin teaching without having had any population education training, either pre- or in-service.

This problem could be avoided if pre-service training institutions were introduced to population education at the same time or only shortly after other units of the ministry. Some population education programmes

or programmes-to-be) have recognized the importance of bringing them in early and have taken the initiative to stimulate their interest and involvement. Two approaches they have used are through training and through involvement in project development.

Action 1 : Have the population education programme staff conduct seminars and provide technical assistance to teacher training institution personnel

In **Somalia**, the population education staff approached this problem first by offering to conduct seminars for the staff of the teacher training institutions, emphasizing the area of content deemed most appropriate. Subsequently, once the staff of these institutions were motivated, they asked the project staff to assist, as resource persons, in the development of a programme for the institution whose task it was to train teachers for the secondary school level.

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In the **People's Democratic Republic of Yemen**, the Higher College of Education provides the training for the teachers of the intermediate and secondary education levels. This college was to be involved, according to the in-school population education project document, only in the preparation of a national sourcebook. With a view to ensuring the involvement of this training institution in the population education activities, its Dean was invited to attend both the sensitization seminar (planning meeting) held at the project start and the regional training seminar provided by the Unesco Regional Office in Tunisia in 1981. After this seminar, the Dean decided to introduce in his College two

training courses on population education each year for the students who are in the last year of their studies.

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In **China**, the first comprehensive 18-day training on population education for all those engaged in training and teaching the subject was organized by the Ministry of Education (with the technical assistance of the Unesco Regional Advisory Team) at Shaanxi Pedagogical Institute at Xian, Shaanxi Province, from 5 to 22 July 1983.

Forty-five participants from different pedagogical institutes, middle schools, educational bureau, universities/colleges, the Ministry of Education and other organizations took part in the training programme.

After ten days of lectures and discussions, the participants were divided into two groups for practical exercises. One group consisted of instructors and professors from pedagogical institutes who were in charge of conducting training programmes. They developed alternative training modalities for the training of different categories of education personnel. Then a prototype training design was drafted for the one-month training of Master Teachers.

Action 2 : Involve officials responsible for teacher training and headmasters of pre-service training institutions in the development of the project document

In **Paraguay**, when the project document was prepared, a representative of the central institution in charge of pre-service training formed part of the team which prepared the project document. The director of this institution also forms part of the Central Coordinating Committee

of the project. This methodology has assured that the population education project has the necessary support of those responsible for pre-service training. Although there is not an administrative link between the department in charge of the project and that in charge of training, the mechanism established by the project works as if there were such an official link.

How to ensure adequate teaching of population education in a pre-service teacher training institution where existing personnel are either in short supply or unqualified to teach the subject

As noted above, it is desirable to begin the teaching of population education in pre-service training institutions as early as possible. In a number of instances, these institutions are willing but not able to begin the teaching of a population education course or unit of an existing course. Their major constraint is personnel - either not enough instructors to devote to this new area or none who are as yet qualified to teach it.

Population education programmes, although not administratively linked to pre-service training institutions, have frequently taken the initiative to help resolve this dilemma. Their actions include teaching it themselves and helping train pre-service instructors.

Action 1 : Have the population education programme take a direct role in developing pre-service training institution curricula, training of their personnel and teaching population education at this level

In the **Sierra Leonean** programme, one of the objectives was to integrate population education concepts into the curricula of teachers' colleges. Therefore, in 1980 the staff made arrangements with the Milton Margai Teachers' College (MMTC) for the preparation and introduction of a course in social studies/population education into the college's curricula. MMTC prepares teachers to be able to teach the lower forms I, II, III of secondary schools.

The population education staff discovered that the eligible teachers were few and already over-loaded with teaching assignments. They therefore took a number of steps to encourage the acceptance of the teaching of population education at MMTC. They assisted in drawing up a social studies/population education curriculum, in drafting a Teachers' Guide, and in preparing an in-service training programme for the tutors. For two consecutive years they actively conducted two-week training courses for the tutors, the first of which made use of an international consultant as the principal resource person. Prior to the training of the tutors, the project staff assisted in teaching the lessons on population education, using the chance to provide demonstration lessons to the tutors. In 1983, to improve the knowledge and skills of the tutors, the project sent two tutors from the College to a one month overseas training in population education.

The pre-service programme at MMTC has now been firmly integrated into the academic programme of the college. The students graduating from the College at the end of 1984/85 academic year will be prepared to teach the subject of social studies/population education in their respective secondary schools.

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In the states in India, the pre-service training of secondary school teachers is the responsibility of the universities, which are autonomous. In order to encourage the universities to accept population education as a part of pre-service training programmes, the national project prepared prototype curricula in population education for B.Ed. and M.Ed. levels. The four Regional Colleges of Education in the four regions of India which are under the direct management of the National Council of Educational Research and Training have organized a series of orientation courses for the Deans of Education and Principals and teachers of teacher training colleges in their respective regions. As a result, many universities and teacher training colleges in India have either integrated population education content in the existing courses, or are offering a separate elective course in population education.

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Optimal planning and management of external inputs

Many population education programmes begin with or include at some stage support from external agencies. This support varies, but usually includes some combination of technical assistance, training and study tours abroad, equipment, and financial assistance for local training and other activities.

External support is intended to help a programme get started, or to help implement one or more specific activities. It is never intended as a long-term replacement for government support. Usually funding agencies are very reluctant to commit resources for long periods of time or for ordinary recurrent costs.

From the country's perspective, the relatively short-term nature of external support may be desirable if it forces the population education programme to develop its activities so that they can be sustained beyond the period of donor assistance. Thus, for example, long-term technical assistance inputs should be planned in such a way that one or more nationals are capable of performing all of a consultant's responsibilities by the time the consultant departs. Equipment inputs should be planned such that maintenance and replacement of parts do not rely on outside help when the externally-funded project ends.

One of the most difficult aspects of external support for some population education activities concerns the payment of funds to project staff, beyond their normal salaries. In some countries, some type of project allowance is essential to ensure the assignment and work of personnel. In other countries it is helpful but not essential. In still other countries, it is not even allowed*.

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* The rule applied by UNFPA in the projects it funds is that salary supplements may only be paid to people who are working more time than they normally would work.

There are numerous examples of externally-supported population education projects, in which special allowances are given to project personnel, which ceased to function when this support was withdrawn. How have population education programmes avoided this problem, sustaining activities after the end of external financial support for project staff ?

Where payment of a salary supplement is considered necessary for the programme to succeed, some governments have agreed to continue paying after the external support ends.

Action 1 : Have the government and the funding agency agree to jointly fund salary supplements during a transition period after which the government will continue these payments

In **Tunisia**, between 1975 and 1981, the funding agency paid a salary supplement to 12 persons from the central and regional team for doing extra work within this project. On the occasion of the formulation of the project extension in 1981-82, the funding agency did not wish to continue paying these incentives and asked the Ministry of Education to take them over. Since the Ministry was not prepared to take over these payments immediately, the difficulties thus created led to the withdrawal of two members of the central project team. Finally, an agreement was reached between the funding agency and the government, stipulating that these incentive payments will be taken over progressively by the government, spread over a period of five years. The government paid 20 per cent in the first year, 40 per cent in the second year, etc. External support is to cease after the fifth year of this assistance.

Lack of experience by population education staff in selection and procurement of equipment from abroad

Many population education programmes are initially supported by external agencies. In a number of these instances, they finance certain items of equipment which are useful in implementing activities.

The problem, however, is that frequently population education programme staff have never had any experience in purchasing such equipment. They are not clear what to get or how to get it.

This is the type of detailed problem which appears initially to be neither or major importance nor specific to population education. In fact, it is this type of problem which can cause major disruptions in the development of a population education programme.

Two national actions by population education programmes are included here - developing a checklist prior to purchasing equipment and focusing on appropriate technology.

Action 1 : Develop and use a checklist of things to consider/do before ordering equipment

The **Somalia** population education staff found that it was helpful to use a checklist prior to submitting equipment orders. Sample items on their checklist were :

- Become acquainted with local or adjacent sources of duty-free goods and services.
- Obtain all catalogues early in the project (or before the project begins) from the local office of UNDP.
- Order early.

- Order directly from the manufacturer when possible.
- Discuss merits of equipment with international advisers assigned to other projects in the country, and other knowledgeable people, before placing orders.
- Determine, as much as possible, compatibility, maintenance constraints, and which spare parts need to be ordered in quantity.

Action 2 : Select the most appropriate pieces of equipment rather than the most modern

The **Sri Lanka** project chose to purchase a particular model printing press which, though outmoded by external standards, was entirely **appropriate for local needs.** Supplies were readily available and personnel were already trained in the use and maintenance of the old press. A more modern model would have required special training and possible problems of maintenance.

This decision worked well in this instance, although projects should also balance the desirability of obtaining something familiar with the possible difficulty of obtaining spare parts for an item which is no longer produced.

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Additional comments

The issues and actions described in this section only touch the surface of programme management. Both issues are concerned with external inputs, which are peripheral rather than at the core of this element.

Issues which are more basic concern **the management of the unit of the ministry responsible for population education.** Examples of additional problems in this area are :

- allocation of personnel among the various sub-units within the population education unit ;
- appropriate location of a national population education documentation unit ;
- high rate of staff turnover.

Other types of management issues concern **the relationship between the population education programme and national and international sources of ideas and materials.** For example :

- how to ensure that the various types of people involved with population education (programme staff, teacher training institutions, regional educational staff, etc.) have adequate access to appropriate information ;
- how to ensure that new information (research studies, census reports, policy changes, etc.) reaches the programme rapidly.

Finally, there still remain some types of programme management issues related to those already mentioned in this chapter, issues concerning external agencies' impact on management, such as how to deal with externally-funded projects. An even more basic issue, however, concerns the extent of external assistance desirable. There are examples of national population education programmes which received very large external support for many years which still have not completely institutionalized this innovation, plus other examples of national programmes which received only marginal external assistance and were

forced to integrate their activities with ongoing educational programmes at all stages. In many instances, population education in the latter type of programme is better institutionalized, although their materials and training activities may not be quite as good. This is a major issue for programme management - to weigh the advantages and disadvantages of various types and quantities of external assistance.

Chapter 8

Monitoring Population Education Programme Progress and Improving their Quality

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How can a population education project respond to demands for impact evaluation from population-based national or funding agencies which are accustomed to applying indicators such as the number of family planning acceptors ?

The bulk of externally-funded population education projects are financed by organizations (such as UNFPA) whose primary focus is on population rather than education activities. Understandably, the majority of their personnel have backgrounds in demography or family planning or other population-related areas ; few are educators.

In some countries, a parallel situation exists at the national level. Whether funds come from national or international sources, they are sometimes channeled to the population education programme through a government body such as a population commission whose major concern is the achievement of national population goals. Like the population funding agencies, few, if any, of the personnel of national population commissions have training and experience as educators.

Given this situation, it is not surprising when the external agency or the national population commission asks for impact evaluation in population, not in educational terms. In these countries (which usually are countries with strong anti-natalist policies) this generally means that impact is evaluated in terms of fertility reduction.

It is true that in some instances - though not commonly - reduction of fertility is a stated objective of a school population education programme. Even in these rare instances, however, there is no possibility of conclusively evaluating the achievement of this behaviour until the students have left school and are several years older. Most population organizations require much shorter-term evaluation of the projects they support.

The corollary to these agencies' understanding of impact evaluation primarily in terms of population factors is their lack of understanding of impact evaluation in educational terms. They rarely have an adequate perception of the way educational programmes traditionally are evaluated.

So how do population education programmes respond to requirements from these agencies for impact information ? Primarily, they have dealt with this issue by educating the funding agencies and population commissions, helping them to understand the importance and methods of educational evaluation.

Action 1 : Emphasize that appropriate short- and medium-term impact of school population education programmes is on knowledge and attitudes, not on behaviour

In **India**, early in the life of the national population education project, there were requests from the Ministry charged with co-ordinating population activities for data indicating impact of the project. Persons outside the project wanted to know what impact it was having on the audience (children and teachers/supervisors). A response in family planning terms might have been of interest to some of the inquirers but would have been entirely inappropriate under the circumstances (this type of impact would probably have been nil at that stage). The project staff dealt with this problem by answering questions in educational terms and in terms of operational achievements. This project was, after all, an **education** project. Data were available on what the teachers and children had learned and, to some degree, on attitude change as well. It would not have been justifiable to

ask for more at that point in the development of the project. Programme assessment reports were issued on numbers of teachers trained, content issues selected for incorporation in the states, the number of states that had set up population education units and had begun operations. Impact assessment reports were limited to the extent of change in knowledge and attitudes among teachers trained up to that point.

The Indian project considered that care must be taken to deal with impact questions in the context of the short-term educational and programme objectives rather than looking at impact from a perspective not relevant to the nature of the project.

> Even if one accepts the measurement of population education impact in educational rather than population terms, how can one supplement or substitute for lengthy longitudinal studies ?

Most population education programmes introduce population concepts at several different grade levels and even, in many instances, at all grade levels. The only truly conclusive way of measuring the impact of such a programme would be to compare the effects on students who have been exposed to all portions of the programme (i.e. in all grades and subjects) with a control group of comparable students who have not received any of the programme. Pre-, interim and post-tests of all students would be required.

Such a longitudinal study may be desirable but is unrealistic for many reasons. A dynamic population education programme will periodically modify the curriculum ; thus, a longitudinal study might measure the impact of a curriculum which, in part, has been replaced...In all countries, it is the intention of the population education programme to integrate population education nationwide, and usually

in a shorter period than the ten or twelve years of an entire school programme ; thus, there is little likelihood of being able to obtain an appropriate control group...Other similar methodological constraints also suggest that a longitudinal impact study of a population education programme is very unlikely to produce the type of information desired.

Furthermore, national and international agencies such as planning and finance ministries, population commissions, and funding groups tend to desire impact information on a much shorter time horizon than such a longitudinal study would require.

How have programmes obtained useful impact information without conducting lengthy longitudinal studies ? This clearly is a question which many other educational programmes have faced and dealt with successfully. In essence, the answer is to assess the programme's effect on knowledge and attitudes, then make educated assumptions concerning the relationship between these changes and later behavioural changes. It is not a perfect solution, but its validity has been verified in many educational content areas.

Action 1 :	*Conduct short-term small-scale studies to measure the impact of population education on knowledge, attitudes and values of students and teachers*

In **Venezuela**, two students of a master's degree programme in population education, as thesis work, performed investigations on the impact of a short-term course (80-100 class hours) throughout a period of five months. Simple quasi-experimental designs of the type pre-test, treatment, post-test, and control groups have been followed, having around 30 students for each group. One study focused on family

life education and the other on sex education. Variables investigated were : attitudes towards family size, age at marriage, age to have the first child, roles of women in society, physiology and anatomy of reproduction, fertility regulation.

In spite of being a small-scale investigation in geographical, sample-size and temporal terms, the results showed than changes do occur in knowledge and attitudes ; also it showed that these small-scale studies are not difficult to perform and the resources needed are of low magnitude. The cumulative information which could be derived from several of those would be of greater value to the further development of population education.

One main limitation of such studies is perhaps that changes are measured almost immediately after the course has finished. Aspects of qualitative and quantitative retention after a longer period could not be drawn from those investigations.

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In **Tunisia**, on the initiative of the national authorities, a research on the impact of the in-school population education programme for the secondary education level was conducted in 1977, a year after it started. In 1985, another impact evaluation will be undertaken, upon the request of UNFPA, using two questionnaires, one for teachers and one for students. The questions relate to the cognitive and attitudinal changes of the students and teachers who have been involved in population education training activities compared to the attitudes of the teachers and students who have not been involved. This will provide an opportunity for a comparison of impact over an eight-year period.

Improving the quality of a population education programme (or selected aspects of it) after it has been underway for several years

Four or five years after a population education programme has been started, there may be loss of momentum, a psychological let-down by project staff. Usually by that time, the basic curriculum has been developed and teacher training is being implemented.

The major thrusts of the programme at this stage are on expansion and quality improvement, rather than on initial development. It is more difficult to sustain motivation for these types of activities, as their impact may appear to be marginal, compared with the more obvious, starting-from-nothing accomplishments during the earlier period. Yet sustaining this motivation is essential if population education is to be successful.

Staff motivation is a necessary, but not a sufficient criterion to ensure that the population education programme is able to improve the quality of its activities while simultaneously expanding nationwide. The programme must also :

- identify the needs for improvement,
- make appropriate changes, and
- communicate them effectively to whoever is to implement them.

These changes or improvements may be in many different aspects of the programme, from curriculum and training procedures to population education unit staffing arrangements, training locales, procedures for distribution of materials and other management practices.

How have population education programmes dealt with the various aspects of this issue ? Two very interesting approaches are described

here - a long-term part-time training for programme staff and a structured form of communication with teachers.

Action 1 : Organize a formal training programme for population education programme staff

After several years of project development, the Ministry of Education of **El Salvador** organized a **two-year, four-hour-daily course** in population education for the staff of the population education project and others. Course participants also included other officials from the central Ministry and from the regional offices who would be involved in population education activities in the future, as well as officials from other ministries working in population education-related fields. There were a total of 75 participants, divided in two sections. The course involved specialists in curriculum design, educational research and evaluation, textbook development, audio-visual aid production, adult education and literacy, in-service teacher training, pre-service teacher training, educational management, home economics, nursing, health education, and agricultural extension.

The participants perform their normal duties from 7.30 to 12.30 and the training course lasts from 2 p.m. to 6 p.m. each day. This means that the time dedicated to study is shared by the government and the participants, since the normal working day ends at 4 p.m.

This course has resulted in substantial improvements in project activities. Development of curriculum and teaching materials is now more concrete and population-oriented, since they can identify more clearly the central issues of the population fields, both at micro and macro levels. Their level of conceptualization of the population issues is now much better than before.

Action 2 : Publish and distribute a periodical bulletin on population education

The **Dominican Republic** population education programme has started the publication of an 8-page quarterly bulletin for officials of the Ministry of Education and classroom teachers.

The publication intends, on the one hand, to maintain the interest of different sectors of the educational system and, on the other hand, to keep teachers informed and up-to-date about different issues of the field. Different section of the bulletin focus on the conceptualization of population education, news on population, methodological aspects of population education and population topics.

Since at least one-half of the bulletin is oriented to the activities of the teacher at class level, it is expected that it will serve to improve the quality of their teaching by communicating new content and suggestions for classroom activities. It is still too early to evaluate objectively its real impact, since there have been only two issues to date.

One thousand copies of the first two issues were distributed, and plans are to expand this in future issues.

*Action 3 : Gather information, opinions, skills and suggestions from a **variety** of sources prior to revising an aspect of the programme*

Before attempting programme improvements, it is very desirable to assess inputs from a variety of sources, rather than from one source

alone. For example, in the **Sierra Leone** project, the curriculum content had been developed largely during the first national seminar held in 1977. At that time, only limited socio-economic and demographic data were available to the project staff, as the population census of 1976 had not yet been analyzed.

By 1981, the report of the 1976 population census was released so that more recent and valuable data became available for curriculum review. In addition, between 1977 and 1981, the project staff had acquired more experience in population education curriculum development, partly through on-the-job practice, and partly through study abroad. The Project Officer responsible for teacher training had participated in a curriculum development training seminar in Thailand. At this seminar, among other topics, the concept of a 'spiral' curriculum was introduced and discussed. Finally, the tripartite review of the Sierra Leonean project held in 1981 had recommended an extension of the project for another two years, thus providing additional funds to the project.

Armed with more new useful data, more skill in curriculum development and more funds, the Project Staff decided to review and restructure the population education programme by providing a more adequate coverage of population concepts relevant to Sierra Leone. A spiral curriculum was adopted, and a new conceptual framework was devised using, however, the same theme as before - Man in His Environment. This new approach resulted in the construction of six new topics, namely :

- Man's Origins, Development and Characteristics ;
- Man's Environment ;
- Man's Culture ;
- Population and Resources ;
- Communication in the Service of Man ; and
- Global issues - Achievements and Problems.

The spiralling method used implied that each of the six topics were introduced in the first year and repeated in greater depth and

wider scope during each succeeding year from secondary classes I, II to III. Population concepts were carefully integrated into early topic/units in a natural manner. Even though the materials were produced for the first three years of secondary education, the new curriculum was designed to cover the additional two years to the end of the secondary cycle, in the hope of a future extension of the course span.

One major conclusion concerning this curriculum revision is that its success was due to the fact that several different types of inputs - assessment of the existing curriculum, up-to-date demographic information, other socio-economic data, new ideas and skills in curriculum planning, a more experienced project staff, and more money - were brought together to produce the new curriculum. Relying upon the results of a single evaluation, or of only one or two types of inputs, does not provide as strong a base for programme improvement as does this multiple-input approach.

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Additional comments

There are numerous other issues related to this element for which interesting national programme action has not been reported to us and, therefore, is not included here. Some other issues have been identified, however :

- how to ensure that formative evaluation is an integral part of the population education programme ;
- lack of relevant, timely, valid research studies as inputs to desired programme improvements ;
- how to ensure that results of studies are actually used to improve the programme's activities.

Outside the field of population education, there is considerable experience on methods of educational research and evaluation, the linkage of such activities to programme improvements and overall programme and project evaluation. Although this experience does not suggest guidelines on the proportion of a programme's human and other resources to devote to research and evaluation, it does suggest that these types of activities can be very valuable.

A source which may prove useful to population education leaders in considering the role and methods of evaluation is *Evaluation Manual*, Sven Grabe, Unesco, 1983. A publication of the Unesco European Centre for Higher Education, *Research and Practice in Education : How to Strengthen Links Between Research and Practice in Order to Improve General Education* (Bucharest, 1980) is one excellent source for suggestions on making research useful to educational programmes. To understand more about approaches to evaluating educational projects, *Evaluating Social Action Projects : Principles, Methodological Aspects and Selected Examples*, Unesco, 1980, is one of several useful guides.

Chapter 9

Transition to an Integral Part of the School Programme

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Although a population education programme may prepare its own materials, the programme cannot really be institutionalized until population is included in the textbooks and other basic source material for existing courses

The importance of textbooks for determining classroom teaching/learning content and activities varies by country, by level and by subject. National procedures for writing and approving textbooks also vary.

Nevertheless, it is clear that textbooks (and other basic source material) do play a major role in most countries in focusing - and frequently in limiting - classroom experience.

Most population education programmes do not start by integrating this new content into textbooks. Rather, the common procedure has been to prepare a separate set of materials, then distribute them and prepare teachers to use them. Any existing textbooks for the subjects to which population education is added are untouched by this procedure, even though the additional time spent on the new population content logically should imply a corresponding decrease in the time spent on the material already in the textbook.

Most education ministries have textbook units with responsibility either for writing textbooks or for approving textbooks written by others. In either instance, the staff of these units are in a key position to determine the content of future textbooks. Unfortunately, most of the staff of education ministry textbook units have little or no exposure to population education. How can a population education programme alter this situation and get textbook unit personnel interested and knowledgeable about population topics ?

Two approaches have been used - training and personnel exchange.

Action 1 : Provide training for textbook writers

In the **El Salvador** project, four textbook writers participate half-time (four hours per day) in a two-year population education degree training programme organized by the Ministry of Education. The programme also trains specialists in curriculum, educational research, pre-service teacher training and audio-visual aids production.

During the development of the training programme, the participants have been progressively incorporating their new knowledge into their work in the Ministry. The four textbook writers are already incorporating new population content into their new texts for primary education.

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In **Pakistan**, the population education programme has provided special training for textbook writers to familiarize them with population issues and their appropriateness according to grade levels. A national workshop was organized in November 1984 by the Federal Ministry of Education, in collaboration with the Population Welfare Division, to :

- orient textbook writers on various aspects of population education ;
- adapt the core messages and curricular materials developed by the Unesco Regional Workshop for the Development of Packages of Adequate Learning Requirements in Population Education ;
- develop textual lessons in various subjects for classes I-X, according to the existing curricula ;
- develop test item pools and audio-visual aids for these lessons.

The workshop involved about 30 curriculum and textbook writers from all the four provinces and the federal areas of Pakistan. It constituted itself into four working groups, namely Sindi/Urdu, Pakistan Studies/Social Studies, Science and Home Economics. Textual materials (mostly as big chunks or units and chapters of books), test items and appropriate audio-visual aids were developed. The textual materials were by and large focused on the core messages of poulation education.

Action 2 : Temporarily exchange staff with the textbook department

In the **Dominican Republic**, population education programme staff were assigned to work full-time in the textbook and materials development department of the Ministry of Education while selected staff from that department assisted the programme staff in developing the prototype materials. This coincided with a national curriculum reform and ensured coverage of key concepts.

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In **Nicaragua**, the staff of the department of curriculum, which produces textbooks, asked the population education programme staff to work with them in the production of three materials and textbooks which include population content.

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In **Paraguay**, the textbook and materials development department of the Ministry of Education assigned staff to work full-time as members of the population education programme staff in all its aspects, with special responsibilities in materials development.

In many countries, new concent may not receive adequate attention in the classroom if it is not included in national examinations

Due to the pressures of work and the importance given to the national examinations for the students' satisfactory completion of the school year, teachers often give high priority to preparing students to take examinations. This implies that the topics included in the examinations will receive most attention in the classroom. Unless population topics are included in the examinations, they may not receive adequate attention.

The obvious solution to this problem is to convince whoever decides on examination questions to include questions on population. This has been done in a number of countries through the normal channels. In addition, one project reports a more active approach in addressing this issue.

Action 1 : Involve examination writers in aspects of the population education project

In the **Somalia** project, one means of ensuring the inclusion of population questions was to involve the people who design the examinations in various aspects of the population education programme (curriculum design, training activities, etc.). This familiarized them with the concepts and they themselves became convinced of the importance of incorporating many of them in the national examinations.

Population education cannot be fully institutionalized until it is taught in **all** pre-service teacher training institutions to all future teachers of population education

The relative independence of teacher training units of education ministries and, in some instances, of individual teacher training institutions, may deter the complete inclusion of population education at this level, even if it is being taught in some institutions. Yet, a full integration of population education into the preparation of new teachers is a necessary aspect of the institutionalization of this innovation.

Preparation of appropriate curriculum and training of instructors in population education is a first step in encouraging pre-service institutions to include this new content area. But this does not guarantee that all teacher training institutions will support this innovation.

One approach which population education programmes have taken to ensure that this other unit of the education ministry provides the full support needed at the pre-service level is to encourage high-level policy intervention.

Action 1 : Require the introduction of population education in pre-service teacher training by decree of the Ministry of Education

Recognizing the importance of, and need for institutionalizing population education in the pre-service training of teachers, the Minister

of Education in Indonesia issued a decree making a population education course mandatory in all the teacher training colleges. As a result, population education is being offered as a separate course in the pre-service training of secondary school teachers.

Developing and sustaining linkages with and support from other ministries and agencies

Population education does not occur in a vacuum. While the population education programme is being developed, numerous other related activities are occurring in education, in population and in general development. The planning, implementation and re-planning of population education activities is more complete, more related to the country's needs if it is linked to national educational and development policies, plans and programmes.

If, for example, a country were to alter the national policies concerning the rights of women or allowable contraceptive methods or age at marriage or other such topics, and the population education programme remained ignorant of these changes, it would be highly detrimental to the programme's image and impact.

Similarly, population education programme implementation is more effective if there are meaningful linkages at all levels with organizations which have convergent interests. The range of ways different organizations can assist in the implementation of population education activities (and, conversely, a population education programme can assist in the implementation of related activities) is considerable. It includes relatively narrow actions, such as sharing facilities or orienting each other's personnel to more substantial actions, such as including population education as a portion of another organization's training courses.

The types of organizations with which linkages are desirable include : other development-oriented government ministries ; national coordinating bodies such as finance ministries, population councils, and planning councils ; voluntary organizations concerned with development such as women's associations, family planning associations and farmer or labour groups ; and others, depending upon the political and social characteristics of the country. Coordination is desirable at all levels, not only at the central level. Finally, coordination is useful with international as well as domestic organizations.

Establishment of effective coordination mechanisms is essential at all stages in the development of population education. It is especially important, however, as a means to ensure the appropriate transition of population education from a special activity to a regular aspect of educational programmes.

The two most common approaches used by population education programmes to ensure coordination are through direct 'bi-lateral' relationships and through establishment of formal coordinating bodies.

Action 1 : Have high-level officials of other agencies participate in the population education programme activities

In the **Sudan**, the in-school and the out-of-school population education projects are managed by the same Population Education Unit within the Directorate of Educational Planning. Both projects benefit from the support of different government agencies and private institutions. The two population education projects arrived at this result by involving those agencies and institutions directly in their project activities.

Examples of linkages between the population education projects and other organizations include :

- Discussions with project staff led the Ahfad University College for Women to introduce a course on population education for all third year undergraduates.
- The project made an agreement with the Sudan Women's Union, according to which the Union is considered as an active co-operating agency in all the project's activities. A special training workshop on population and family life education will be organized for the Union leaders to establish a detailed plan for co-operation between them.
- An agreement was also reached with the Abu Halima Social Centre and Soba Centre for the Training of Girls, both run by the Department of Social Welfare, on the integration of population education in their respective training curricula. For this purpose, a training workshop for teacher educators is currently planned.
- A two-day seminar on population and family life education was held in 1984 in co-operation with the Family Planning Association.
- A two-day meeting on the same topic was conducted with the Community Medicine Programme staff.

Action 2 : Establish formal coordination bodies at different levels

In **India**, a National Steering Committee on Population Education has been set up with the authority for overall coordination as well as implementation of the population education programme. The Committee

meets three to four times per year to assess the progress of implementation and gives new directions to programme personnel for improving the quality of different aspects of their activities. The Committee also takes necessary actions to solve any problems that the programme faces. The Committee is represented by the following members from different ministries/departments of the federal government :

- Secretary, Ministry of Education and Culture as Chairman ;
- Director, National Council of Educational Research and Training (NCERT) ;
- Chairman, University Grants Commission ;
- Chief, Education Division, Planning Commission ;
- Director, National Institute of Educational Planning and Administration ;
- Chairman, Central Board of Secondary Education ;
- Director, Directorate of Adult Education ;
- Joint Secretary, Ministry of Health and Family Welfare ;
- Joint Secretary, Ministry of Food and Agriculture (In-charge Training) ;
- Joint Secretary, Ministry of Labour (In-charge Training) ;
- Joint Secretary, Ministry of Industries (In-charge Training) ;
- Joint Secretary, Ministry of Information and Broadcasting (In-charge Mass Media) ;
- Joint Secretary, Department of Rural Development ;
- President or Representative, Family Planning Association of India ;
- Project Coordinator, NCERT ;
- Joint Secretary, Adult Education ;
- Joint Secretary, Higher Education ;
- Representatives from State Projects ;
- Joint Secretary, Ministry of Education.

In India, most educational activities are the responsibility of the state rather than the federal government. Therefore, to coordinate implementation of population education, each state has a State Coordination/Advisory Committee with functions similar to those of the National Steering Committee.

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In the **Tanzanian** programme, local support from other agencies helped improve the quality of implementation. They formed a Project Advisory Committee in which were represented all relevant Party cadres, Government departments, para-statals, older projects established with external assistance, and non-governmental organizations. The Advisory Committee meets at regular intervals to advise on and to monitor the progress of programme developments.

One important project objective was to train 150 WAZAZI (Tanzania Parents' Organization) secretaries in responsible parenthood and family life so that they could include such discussions during their regular meetings with parents of the provincial, district and local levels. In preparation for this three-week training course, the Project Staff formally requested and obtained additional visual aids (posters, flannel cards, charts, etc.) from the Family Life Education project based in Arusha ; the latter also assisted in reproducing a large number of these posters, charts, etc., to enable every trainee to have enough materials to carry home to his/her location after training. Formal invitations to support the training course were sent to other agencies. Some examples of the responses were as follows :

- The Community Development Department sent six of its staff to participate as trainees, and also provided a vehicle to assist in transporting the trainees from Dar-es-Salaam to Bagamoyo, the training venue located about 70 kilometers away.
- The Family Planning Association of Tanzania (UMATI) also sent six of its staff as trainees, one of its senior staff as trainer, and also provided a vehicle to transport trainees.
- The Office of the Prime Minister provided a vehicle for transporting the participants.
- A number of senior Party officials participated both during the opening and closing ceremonies of the training course.
- All available mass media adequately covered the training activities before, during and afterwards.

Through the collaborative efforts of these agencies and the full participation of the trainees and their trainers who also prepared and submitted in time their commissioned papers, the project successfully organized an effective training course for the WAZAZI secretaries and other non-WAZAZI trainees.

Action 3 : Have other organizations popularize population education

In **Indonesia**, Dharma Pertiwi (Indonesian Armed Forces Wives Organization, is very active in all types of developmental activities down to the village level. In order to involve them in the population education programme, a national seminar was organized by the Indonesian Armed Forces Family Planning Unit in May 1979. The main purposes of the seminar were to orient the key personnel of Dharma Pertiwi about population education and to plan strategies for the implementation of the population education programme. The 125 participants consisted of wives of Chiefs of Staff and wives of Regional Commanders from all over the country.

The seminar included orientation talks and audio-visual presentations about population education in Indonesia and throughout Asia.

Since this seminar, Dharma Pertiwi has accorded full support to the population education programme of the Armed Forces and has been instrumental in popularizing it to the village masses.

Community and/or parental opposition

It was noted earlier that an important characteristic of population education is that some of its content may be potentially controversial in some countries. In some instances, this controversy is based upon a misunderstanding rather than the reality of population education ; in other instances, there are real objections to some of the value changes promoted by the programme.

In earlier chapters, the implications of this characteristic of population education for high-level policy-makers, curriculum developers, teacher trainers, and other educators were noted. For each of these, national actions were described, providing examples of ways programmes have dealt with controversy, opposition and indifference.

Finally, in this chapter, this same characteristic of the field is presented in the context of parents and their communities. If there is strong opposition to parts or all of population education at this level - even if it has been approved and implemented within the educational system - population education is not likely to be successful at achieving its objectives. Achieving support from parents and community leaders is the final, but crucial step in ensuring the effective integration of population education into regular educational programmes.

Existing population education programmes have found this problem to be an exceptionally interesting one in which to exercise their creativity, and have devised a number of actions to obtain parental and community support. These include : helping the project staff itself to better understand potential community opposition ; conducting a variety of actions aimed at creating an awareness and understanding of population education among different groups ; having students serve as a link between the school programme and the wider community ; and actively involving potential opponents in population education activities.

Action 1 : Train programme staff on the relationship between the local religion(s) and controversial issues

In the **Somalia** project, when the possibility of opposition on religious grounds appeared, the staff received training on specific religious issues which might be raised in the context of that country, and how to deal with those issues. They added to their knowledge subsequently by taking note of such issues raised by trainees from time to time and they prepared themselves to deal with these issues when they were raised again later by others.

Action 2 : Conduct awareness activities for parents, community leaders and others

As a means of preventing opposition from parents who did not fully understand the aims and activities of the project, the population education staff in **El Salvador** carefully selected and trained 18 'agentes multiplicadores' (multiplier agents) who went into the field to conduct non-formal education/awareness creation activities specifically for parents and community leaders. This provided an opportunity for concerned parents in all communities to raise questions and, in some cases, to participate in the decision-making process regarding issues of general content for the school programme.

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A similar procedure was followed by the **Somalia** project staff, who trained a group of master teachers who carried out community

awareness activities in addition to their teacher training duties. In addition, a seminar to familiarize religious leaders with population education activities was conducted. As a result, many of them now provide active support to the programme.

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Professional organizations have an important role to play in assisting population education programmes. Thus, in various parts of **India**, teachers' associations, English language institutes and doctors'and nurses' associations have been actively involved in population activities. One such group is the United Writers Association (UWA) with Headquarters in Madras. The UWA is a non-profit association devoted to the enhancement of life in India. The association has conducted periodic seminars and symposia on population education to sharpen awareness, encourage participation and stimulate the thinking of people with respect to these issues. As a bureau of liaison, the UWA functions to share the experience of voluntary agencies in order to help them grow, and to collaborate in their programme.

*Action 3 : **Either directly or indirectly, have students conduct awareness activities for parents, community leaders and others***

In **China**, the pilot schools organize an annual population education exhibition and fair for the community. This includes showing plays, slides and films ; display of posters, models, etc. ; and lectures and discussions on population education and family planning. This activity is very popular with the community and is regularly attended by hundreds of people.

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"What is the biggest and the smallest country in the world in terms of population ? If we control population in our small country, will it affect our development programmes due to lack of human resources ? If we control population, will it not lead to a shortage of brains in the future ? Can you list the problems that a rapid population growth create ?"

These are just a few of the many inquiries Sri Lankan students sent to the Population Information Centre which encouraged the Centre to run a feature column in *Mihira* (Delight), Sri Lanka's largest selling weekly.

With a circulation of about 100,000, this journal was used by the Population Information Centre of Sri Lanka as a vehicle to convey population data to tens of thousands of secondary pupils in this country.

What prompted the Population Centre to make use of this medium is the fact that about 50 letters a month reached the Centre requesting population information. The majority who wrote in were students who were taking an increasing interest in population matters, since in several school subjects, like commerce, geography, economics and social studies, some parts of their syllabi deal with basic aspects of demography. The result was an interesting interaction between a population education and a population communication activity.

The series began on Monday, 27 July 1981, with a short feature on what the Population Census of 1981 had revealed, such as total population, previous population census figures and so forth. Further features dealt with population distribution according to districts, race and religion. Several children wrote in to say that they appreciated these features. The Editor of the weekly himself admitted that he was surprised that some teachers too were becoming interested in those facts and figures. His only request was to continue with this popular column.

Recently, yet another innovation was added to this feature series. This was to invite questions from the readers on matters dealing with

population. It was announced that the questions along with the name of the sender and the reply would be published in the *Mihira*. The response has been very encouraging.

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In the **People's Republic of China**, the population education objectives include promotion of the national policy of encouraging one-child families. Secondary students are required to conduct surveys and to motivate villagers as a part of the population education programme. Through **social investigations**, the students investigate population-related problems occurring in their own commune, analyse them and offer alternative solutions to these problems. During holidays, they publicize the Party's population policy to their parents, relatives and neighbours and motivate them to practise family planning.

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In **Nicaragua**, the population education project staff advised a group of high school students in the preparation of a **display on sex education** - its conceptualization, importance and main topics - which the students would use to participate in a nation-wide competition on science education.

There were ten regions in the competition. The sex education display obtained the first prize at a regional level and later obtained the second prize at a national event which combined the regional winners. The national prize was very significant, since this competition draws great interest and wide participation from the whole country and also that the first prize was given to a project on oral rehydration which was considered at the time as the country's highest national health priority. The display in the fair allowed many people to recognize the importance of sex education and to learn more precisely what its nature is. According to the national staff, they felt that co-operation from authorities has increased since then.

Annexes

Annex I

Selected Readings

I. GENERAL

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II. AFRICA

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III. ARAB STATES

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IV. ASIA AND THE PACIFIC

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V. LATIN AMERICA AND THE CARIBBEAN

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Annex II

Addresses of Unesco Population Education and Population Communication Units and National Population Education Projects

I. UNESCO HEADQUARTERS

Population Education Unit
Division of Sciences of Education,
Contents and Methods
Unesco
7, place de Fontenoy
75700 Paris
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Population Division
Sector of Social and Human Sciences
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2. REGIONAL ADVISERS IN POPULATION EDUCATION

Africa

Unesco Regional Office for Education
in Africa (BREDA)
P.O. Box 3311
Dakar
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Arab States

Unesco Regional Office for Education
in the Arab States (UNEDBAS)
c/o Unesco Headquarters
7, place de Fontenoy
75700 Paris
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Asia

Unesco Regional Office for Education
in Asia and the Pacific (ROEAP)
and Clearing House Services for
Population Education
G.P.O. 1425
Bangkok 10500
Thailand

Pacific

Population Education Programme
c/o United Nations Development Programme (UNDP)
Private Mail Bag
Suva
Fiji

Latin America and the Caribbean

Unesco Regional Centre for Higher Education
in Latin America and the Caribbean (CRESALC)
Apartado Postal 62090
Caracas 1060 A
Venezuela

3. REGIONAL ADVISERS FOR POPULATION COMMUNICATION

Africa

Unesco Regional Office for Education
in Africa (BREDA)
P.O. Box 3311
Dakar
Senegal

Unesco Regional Office for Science and
Technology in Africa (ROSTA)
P.O. Box 30592
Nairobi
Kenya

Arab States

Population Communication Programme
c/o United Nations Development Programme (UNDP)
P.O. Box 35286
Amman
Jordan

Latin America and the Caribbean

Unesco Regional Office for Education
in Latin America and the Caribbean (OREALC)
Apartado Postal 3187
Santiago de Chile
Chile

4. POPULATION EDUCATION NATIONAL PROJECTS

AFRICA

Title of Population Education Project	Implementing Unit and/or Contact Person
REPUBLIQUE POPULAIRE DU BENIN	
Introduction à l'Ecole de l'Education en matière de Population et Education à la vie familiale (BEN/83/P01)	Mme Nathalie Barboza Directrice Nationale c/o Commission Nationale Béninoise pour l'Unesco B.P.520 Porto Novo République Populaire du Bénin
BURKINA FASO	
Introduction de l'Education en matière de population et de l'éducation sexuelle dans le système éducatif (UPV/84/P01)	Mme Yvette Kompaore Coordonnatrice du I.N.A.F.A. B.P. 1179 Ouagadougou Burkina Faso
GUINEA	
Education en matière de population (GUI/84/P02)	M. Alioune Diallo Directeur général de l'IPN B.P. 823 Conakry Guinée
IVORY COAST	
Activités préalables au projet de santé maternelle et infantile et d'éducation en matière de population (IVC/83/P01)	M. A. Rotival Représentant du FNUAP 01 B.P. 1747 Abidjan Côte d'Ivoire

Title of Population Education Project	Implementing Unit and/or Contact Person
REPUBLIQUE DEMOCRATIQUE DE MADAGASCAR	
Education en matière de population (MAG/81/P01)	Directeur National Projet MAG/81/P01 Ministère de la Population, de la Condition Sociale, de la Jeunesse et des Sports Antananarivo République Démocratique de Madagascar
MAURITIUS	
Population and Family Life Education in School and Out-of-School (MAR/84/P01)	Mr. C. Ramchurn National Project Manager Ministry of Education, Arts and Culture Port Louis Mauritius
NIGER	
Education en matière de population : Motivation et Formation (NER/83/P02)	M. Abdou Hima Directeur National c/o Ministère de l'Education Nationale Niamey Niger
NIGERIA	
Comprehensive Population Education Programme (NIR/83/P01)	Mrs. Y. Holloway Project Director Nigerian Educational Research Council P.O. Box 8058 Lagos Nigeria

Title of Population Education Project	Implementing Unit and/or Contact Person
SIERRA LEONE	
Integrating Population Education into the Science Curricula of Secondary School, Pre-Service Teacher Education and into the Curriculum of Non-Formal Education (SIL/84/P02)	Mrs. J. Amara Project Director Designate Lecturer, Njala University College University of Sierra Leone Freetown Sierra Leone
DEMOCRATIC REPUBLIC OF SOMALIA	
Population Education Project (SOM/79/P07)	Mr. Abdi Ibrahim Awaleh Project Director Population Education Project Ministry of Education Mogadishu Democratic Republic of Somalia
UNITED REPUBLIC OF TANZANIA	
Preparatory Activities for Population and Family Life Education in Tanzanian Schools (URT/85/P01)	Mr. Olé Kambaine Project Director Ministry of Education c/o Mrs. Wilma Goppel UNFPA Deputy Representative P.O. Box 9182, Dar-es-Salaam United Republic of Tanzania
TOGO	
Introduction de l'Education Sexuelle à l'Ecole (TOG/84/P02)	Mr. Komla Agbetiafa Ministre de l'Education Nationale et de la Recherche Scientifique Directeur du Projet B.P. 12175 Lomé Togo
ZAMBIA	
Introduction of Population Education in Selected Primary and Secondary Schools and Teachers Colleges (ZAM/85/P03)	Mr. William Chileshe Project Manager National Curriculum Development Centre c/o Ministry of General Education and Culture Lusaka, Zambia

ARAB STATES

Title of Population Education Project	Implementing Unit and/or Contact Person
ARAB REPUBLIC OF EGYPT	
Introduction of Population Education into Literacy and Adult Education Programme (EGY/83/P06)	Mr. Mohamed Khalafawi Chief Population Education Unit Ministry of Education Cairo Arab Republic of Egypt
MAROC	
Intégration de l'Education en matière de Population dans l'enseignement primaire et secondaire (MOR/80/P11)	Mr. A. Khallafi Directeur National du Projet d'Education en Matière de Population Direction de la Formation des Cadres Ministère de l'Education Nationale Rabat Maroc
DEMOCRATIC REPUBLIC OF THE SUDAN	
In-School Population Education Project (SUD/79/P09) Out-of-School Population Education Project (SUD/79/P10)	Mr. Mubarak Yahia Abbas Population Education Project Director Ministry of Education and Guidance Office of the Under-Secretary P.O. Box 284 Khartoum Democratic Republic of the Sudan
TUNISIA	
Introduction de l'Education en matière de Population dans les 5e, 6e, 7e et 8e années de l'Enseignement Primaire (TUN/82/P01)	Mr. Habib El Jemmali Responsable du projet d'éducation en matière de population dans l'enseignement primaire Ministère de l'Education Nationale Boulevard Bab Benat Tunis Tunisie

Title of Population Education Project	Implementing Unit and/or Contact Person
TUNISIA (cont'd)	
Introduction de l'éducation en matière de population dans l'enseignement secondaire (TUN/82/P02)	Mme N. Kochtane Responsable de projet d'éducation en matière de population dans l'enseignement secondaire Ministère de l'Education Nationale Boulevard Bab Benat Tunis Tunisie
Intégration de l'Education en matière de Population à l'Institut Supérieur de l'Education et de la Formation Continue (TUN/83/P02)	Mr. Ammar Mahjoubi Directeur Institut Supérieur de l'Education et de la Formation Continue 43, rue de la Liberté 2019 Le Bardo Tunis Tunisie
PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN	
In-School Population and Family Life Education Project (PDY/79/P07) Out-of-School Population and Family Life Education Project (PDY/79/P08)	Mr. Nageeb Sallami National Coordinator c/o Dr. Faysal Abdelgadir UNDP P.O. Box 1188 Aden People's Democratic Republic of Yemen
ASIA	
AFGHANISTAN	
Family Life Education Through Mass Education Programme (AFG/78/P08)	Dr. Batenshah Wafarsai President General Agency for Literacy Campaign Ministry of Education Kabul Afghanistan

Title of Population Education Project	Implementing Unit and/or Contact Person
BANGLADESH	
Population Education in the Formal Education Systems (BGD/80/P01)	Mr. M.A. Mannan Executive Director Population Education Programme Education Division Ministry of Education and Religious Affairs House No. 62 Road No. 7/A (New), Dhanmondi R/A Dhaka-9 Bangladesh
PEOPLE'S REPUBLIC OF CHINA	
Population Education in Secondary Schools (CPR/80/P14 & CPR/85/P38)	Mr. Sun Dongtang Project Director Ministry of Education 37 Da Mu Cang Hu Tong Xi Dan Beijing People's Republic of China
INDIA	
Population Education Programme: Formal Education System (IND/79/P10)	Prof. B.S. Parakh Head, Population Education Unit National Council of Educational Research and Training (NCERT) Sri Aurobindo Marg New Delhi 110016 India
INDONESIA	
National Population Education Programme	Mr. Sukotjo Hardjosarwono Director National Education Project Ministry of Education and Culture B.P. 3x, Jalan Jenderal Sudirman Senayan, Tromol Pos 297 KBY Jakarta Indonesia

Title of Population Education Project	Implementing Unit and/or Contact Person
INDONESIA (cont'd)	
Technical Backstopping of Population Education Programmes (INS/83/P07)	Dr. Sans S. Hutabarat Head, Bureau of Family Planning Education National Family Planning Coordinating Board P.O. Box 186 Jakarta Indonesia
Population Education in Schools and Institutions of Islamic Education (INS/83/P09)	Dr. H. Bachroen Dipo Chairman Family Planning Unit Ministry of Religious Affairs (Department Agama) Jl. Kebon Sirih No. 57 Jakarta Pusat Indonesia
Population Education in Schools of Council of Churches (DGI) (INS/83/P08)	Mr. F.W. Raintung Project Officer Population Education Council of Churches (DGI) Jl. Salemba Raya No. 10 Jakarta Pusat Indonesia
Population Education through Muhammadiyah Educational Programmes (INS/83/P04)	Mr. H.R. Darsono Muhammadiyah Educational Organization Jl. Gandaria I IA Kebayoran Baru Jakarta Selatan Indonesia
Population Education in the Armed Forces of the Republic of Indonesia (ABRI) (INS/83/P05)	General P. Paseribu Head, Population Education Project Indonesian Armed Forces (ABRI) Jl. R.S. Fatmawati No. 3 Jakarta Selatan Indonesia

Title of Population Education Project	Implementing Unit and/or Contact Person
REPUBLIC OF KOREA	
National Population Education Programme	Population Education Programme c/o Mr. Park-Bong-Shik Secretary-General Korean National Commission for Unesco G.P.O. Box 64 Unesco House Myung-Dong-Choong-Gu Seoul Republic of Korea
MALAYSIA	
Population Education in the School System (MAL/73/P03)	Miss Asiah Abu Samah Director Curriculum Development Centre Ministry of Education Pesiaran Duta, Off Jalan Duta Kuala Lumpur 11-04 Malaysia
Family Health and Family Life Education Through Family Development (MAL/79/P03)	Cik Rohana Ahmadun Director Family Development Unit Ministry of National and Rural Development Jalan Mahameru Kuala Lumpur Malaysia
MALDIVES	
Population Education in Formal and Non-Formal Education in Maldives (MDV/84/P01)	Mr. Mohamed Latheef Director Educational Development Centre Ministry of Education Male Maldives
NEPAL	
Population Education in the Formal Education System (NEP/80/P08)	Mr. I.P. Uphadhaya Joint Secretary Ministry of Education Kathmandu Nepal

Title of Population Education Project	Implementing Unit and/or Contact Person
NEPAL (cont'd)	
Population Education in the Non-Formal and Adult Education (NEP/83/P12)	Same as above
PAKISTAN	
Population Education through Literacy and Adult Education Programmes (PAK/84/P01)	Chairman Literacy and Mass Education Commission H.6, St.28, F-7-2 Islamabad Pakistan
PHILIPPINES	
Regionalization of Population Education (PHI/80/P03)	Mrs. Rosa C. Mendoza Executive Officer Population Education Programme Ministry of Education, Culture and Sports (MECS) Palacio del Gobernador on Aduana Street Intramuros Manila Philippines
SRI LANKA	
Population Education in Schools (SRL/83/P01)	Mr. W.S. Perera Project Director Population Education Unit Ministry of Education Colombo Sri Lanka
THAILAND	
Development and Implementation of Population Education (THA/78/P01)	Dr. Pramodya Chaiyakit Deputy Director-General Department of Curriculum and Instructional Development Ministry of Education Bangkok Thailand

Title of Population Education Project	Implementing Unit and/or Contact Person

SOCIALIST REPUBLIC OF VIET NAM

Population Education in the Formal and Complementary Education System (VIE/84/P06)	Mr. Le Nang An Deputy Director Department of International Co-operation Ministry of Education Hanoi Socialist Republic of Viet Nam

PACIFIC

COOK ISLANDS

School Population Education (CKI/84/P01)	Mrs. Cecilia Kave Senior Curriculum Adviser Ministry of Education P.O. Box 97 Rarotonga Cook Islands

FEDERATED STATES OF MICRONESIA (FSM)

Population Education in the Federated States of Micronesia (TTP/84/P07)	Mr. Stuart Arno Programme Development Coordinator Department of Social Services Government of the Federated States of Micronesia Kolonia, Ponape Eastern Caroline Islands 96941

FIJI

School Population Education (FIJ/82/P01)	Mr. Divakar Rao Curriculum Development Unit Ministry of Education, Youth and Sports Nasese Suva Fiji

Title of Population Education Project	Implementing Unit and/or Contact Person
THE MARSHALL ISLANDS	
Population Education in the Marshall Islands (TTP/80/P04)	Mr. Kinja Andrike Secretary of Education Government of the Marshall Islands Majuro The Marshall Islands 96960
PALAU	
Population Education and Development in Palau (TTP/85/P02)	Ms. Christina Kadoi Director Population Education Project Bureau of Education Koror Palau
THE SOLOMON ISLANDS	
Populuation Education and Awareness (SOI/80/P02)	Mr. Daniel Buto Permanent Secretary Ministry of Education and Training Government of the Solomon Islands P.O. Box 584 Honiara The Solomon Islands
TONGA	
Population Education and Awareness in Tonga (TON/80/P03)	Mr. Mana Latu Senior Education Officer Ministry of Education P.O. Box 61 Nuku'alofa Tonga
WESTERN SAMOA	
School Population Education (SAM/85/P01)	Mrs. Tili Afamasaga Principal Secondary Teachers College P.O. Box 201 Apia Western Samoa

Title of Population Education Project	Implementing Unit and/or Contact Person

EUROPE

TURKEY

Support for Introduction of Population Topics in Non-Formal Education (TUR/83/P01)	Mr. Hüseyin Gevrekci National Project Coordinator Institute of Non Formal Education Ministry of National Education and Sports Kampusu Blok "F" Besevier Ankara Turkey

LATIN AMERICA AND THE CARIBBEAN

COSTA RICA

Population Education Materials for the Third Cycle of Basic Education and the Fourth Cycle of Diversified Education (COS/85/P01)	Director Nacional a/c Oficina del PNUD Apartado Postal 4540 San José Costa Rica

REPUBLICA DOMINICANA

Educación en Población (DOM/84/P02)	Sr. Antolín Santana Director Nacional del Proyecto de Educación en Población Secretaría de Estado de Educación Av. Máximo Gómez # 66 Of. 403, Santo Domingo Republica Dominicana

EL SALVADOR

Planeamiento Curricular para la Educación en Población (ELS/82/P02)	Sr. Carlos A. Burgos Director Nacional del Proyecto Planeamiento Curricular para la Educación en Población a/c de Naciones Unidas Apdo. Postal 1114 San Salvador El Salvador

Title of Population Education Project	Implementing Unit and/or Contact Person
EL SALAVADOR (cont'd)	
Programa Nacional de Capacitación en Educación en Población (ELS/83/P01)	Lic. Oscar Ramírez Pérez Coordinador del Programa Nacional de Capacitación en Educación en Población a/c Oficina del PNUD Apdo. Postal 1114 San Salvador El Salvador
GUATEMALA	
Programa de Capacitación en Educación en Población para Maestros del Nivel Primario (GUA/84/P02)	Lic. Olga Hernández de León Directora Nacional del Programa de Capacitación en Educación en Población p/Maestros del Nivel Primario Div. de Desarrollo Curricular USIPE, 6ta. Av. 3-11, Zona 4 Guatemala Guatemala
HAITI	
Education en matière de Population (HAI/83/P01)	M. Guy S. Pompilus Directeur National du Projet d'Education en Matière de Population Bureau du PNUD Boîte Postale 557 Port-au-Prince Haiti
HONDURAS	
Educación Escolar y Extra-escolar en materia de Población (HON/81/P01)	Prof. Aida Midence Ramos Coordinadora General a/c Oficina del PNUD Apartado Postal 976 Tegucigalpa Honduras

Title of Population Education Project	Implementing Unit and/or Contact Person
NICARAGUA	
Educación y Comunicación en Población (NIC/83/P04)	Sra. Socorro Espinales Coordinadora Nacional del Proyecto de Educación y Comunicación en Población a/c Oficina del PNUD Apdo. Postal 3260 Managua Nicaragua
PARAGUAY	
Programa de Educación Familiar y Población (PAR/79/P10)	Sra. Perla M. de Cibils Directora Nacional del Programa de Educación Familiar y Población a/c Oficina del PNUD Casilla de Correo 1107 Asunción Paraguay
PERU	
Programa Nacional de Educación en Población (PER/83/P07)	Sra. Graciela Ruíz Durán Coordinadora del Programa Nacional de Educación en Población a/c Oficina del PNUD Apartado 4480 Lima Perú
MÉXICO	
Educación en Población para la Mujer (MEX/81/P01)	Lic. José Guillermo Saavedra Coordinador General de Programas Consejo Nacional de Población CONAPO Angel Urraza # 1137, P. 5 Esq. Pestalozzi Col. del Valle México 03100 D.F., México

Annex III

Trends in Teacher Education

Note : This inventory is only proposed as a working instrument. It does not intend to portray an evolution occurring everywhere.

I. TOWARDS NEW OBJECTIVES

From...	To...
	...Lifelong Education
1. Emphasis on pre-service and "one-shot" training	The concept of lifelong education and retraining
2. Teachers as "specialists in transmitting pre-established curricula"	Teachers as "educators" in the widest sense
3. The "conservative teacher", holding firm in the face of change	The "adaptable teacher", willing to experiment and change
4. Lengthy preliminary preparation and occasional in-service stimulation	A systematic and career-long progressive preparation
	...Competency-Based Training
5. Preoccupation with philosophy and theories of education	Performance-based or "competency-based" teacher education
6. Backward-looking to the historical development of education	Forward-looking to pupil and community needs today and tomorrow
7. Obscure, "intangible" objectives	Performance objectives - what the teacher must be able to do
8. "Model the master teacher"	"Master the teaching model"
9. Teaching as an art, either a natural gift or learned through imitation and total exposure	Teaching as a combining of well-practised instructional, management and curriculum-building skills

(1) Abstracted from *Workshop Guide for Teacher Educators*, Document ED/HEP/TEP 81/225 - ED.82/WS/13, part C, Annex I, Unesco, Division of Higher Education and Training of Educational Personnel, Paris, 1981.

...Economy

10. Extension of training time	More effective use of training time
11. General training directed at formal examination results	A system approach directed at measurable outcomes
12. Teacher training within an established curriculum	Teacher education and curriculum development articulated
13. Teacher training results assessed by number of teachers certificated, without cost analysis	A sense of accountability in terms of cost and measurable teacher performance
14. Preoccupation with lengthening the period of initial training	A search for more economic forms of continuous training

II. TOWARDS REORGANIZATION AND PROGRAMME REVISION

...Flexibility

15. Emphasis on fixed training programmes, standards and procedures	Emphasis on flexible adaptation to changing needs in teacher training and in education
16. Uniform training procedures and assessment for all student-teachers	Adaptation of programmes to individual differences and needs
17. Time-locked, space-bound training programmes, set by "subjects" and periods	Increase in unscheduled time and in the range of learning activities
18. Use of College confined largely to "semesters" and student-population	Emphasis on full use of College facilities through the year for in-service as well as preservice groups

...Coordination

19. College programmes organized on a subject-tutor basis	Coordination of College functions, of staff and of facilities
20. Little relation between "theoretical" studies and practical	All studies focussed on "learning" and "teaching"

21. Academic and professional studies proceeding separately	Academic and professional studies concurrent and mutually reinforcing
22. Training equipment and other resources dispersed, with Library reserved for book materials	Basic learning resources, equipment and materials consolidated in a Learning Resource Centre

...Changing Curricula

23. Static curricula conceived in terms of content	Flexible curricula conceived in terms of formative learning experiences
24. A multiplicity of subject studies	Studies organized coherently by "themes" or "unit packages"
25. College curricula distinguished by quantity of information	Careful selection of content in support of quality of thinking
26. Rigid separation of disciplines and subject studies	Interdisciplinary studies relating to world issues developed co-operatively by staff teams
27. Conventional studies in history, geography or social studies	"Environmental studies" or "Development Studies" directed at current problems and their solutions
28. Programmes concerned with the development of teacher as "pedagogue"	Concern with development of teacher as a person as well as a professional
29. Teaching studies concentrated on the "lesson" and "lesson planning"	Teaching studies focused on the "unit" and development of "unit packages"

III. NEW TOOLS AND TECHNIQUES

...Using the Multimedia

30. Being taught by the "authority" of the tutor through explanation and exhortation	Learning actively and creatively through varied activities and new techniques such as micro-teaching, interaction analysis, role-playing and simulation

31. Training teachers for a didactic role	Equipping teachers for different roles and functions imposed by the new technologies
32. Audiovisual aids as a supplement to instruction	Using the multimedia selectively to enrich learning experience
33. "Teaching practice" in full class situations for about 12½% of training time	Microteaching with miniaturised teaching situations and systematic practice of instructional skills as a preliminary to field teaching
34. "Critique" by tutor or supervising teacher	Videotape feedback of teaching performance, discussion, self evaluation
35. Observing the "master teacher" or other models	Use of videotape models and protocols representing typical teaching-learning situations to assist the teacher to develop his own teaching style
36. Main emphasis on using AV aids for projecting to student as "consumer"	Increasing emphasis on student-teacher learning as a "producer" of tapes, slides, transparencies or other educational aids

...Independent Learning

37. Being taught primarily by precept and example	Learning to learn; and learning to think by active problem-solving
38. Lecturing methods in set-group situations prevail	Learning independently in response to assignments or own initiatives
39. The student-teacher receives information about the curriculum	The student-teacher produces curriculum materials of real and immediate value
40. Student-teachers taught how to prepare subject lessons for classroom delivery	Teachers learn by building curriculum units for pupil learning
41. Supervised "term" papers or formal assignments common to group	Working at own pace through open-ended, self-instructional units with multimedia support

42. Routine "descriptive" questions and assignments	Assignments and questions aimed at more complex thinking skills
43. Assessment by formal, terminal examinations	Continuous assessment, including self-appraisal, as integral part of the learning process
	...Group Process
44. Grouping for necessity or convenience	Use of the group to stimulate learning
45. Open forum or conference with limited feedback	Structured "Workshops" aimed at specific training and production outcomes with optimal participation and feedback
46. Teachers in training, working independently, make a few teaching aids, primarily for assessment	Teachers in training, working together, design educational materials for reproduction and general use
47. Teacher training is individual and competitive	Student-teachers cooperate in observation, microteaching and team teaching exercises
48. The teacher educator as instructor and assessor	Supervision and guidance as the teacher-educator's new role
49. College courses developed by individual tutors	College courses developed by staff teams
50. The so-called "Education" tutor as "methods" specialist and supervisor of teaching practice	Curriculum Studies and Foundation Studies tutors as equal, cooperating partners in College teaching-learning programmes

This list is not exhaustive. The above-mentioned trends are essentially based on *Learning to Be, op. cit.* Similar orientations have also been given by the following international conferences :

. 35th Session of the International Conference on Education - Geneva - 1975
. Conference of Ministers of Education of African Member States - Lagos - 1976
. Conference of Ministers of Education and those Responsible for Economic Planning in the Arab States - Abu-Dhabi - 1977
. Fourth Regional Conference of Ministers of Education in Asia/Oceania - Colombo - 1978
. Regional Conference of Ministers of Education in Latin America and the Caribbean - Mexico - 1979.